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EDITED BY

MORTON PRINCE, M.D., LL.D.

IN COLLABORATION WITH

HENRY T. MOORE, A.M., Ph.D.

Dartmouth College, Hanover, N.H.

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EDITORIALS

ORIGINAL ARTICLES

REVIEWS

NEW BOOKS RECEIVED

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THE JOURNAL OF ABNORMAL AND SOCIAL PSYCHOLOGY

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EDITORIALS

COMMON SENSE AND SCIENTIFIC METHOD IN PSYCHOLOGY

THE topic of Instinct is fast becoming the rock on which Social Psychology divides into two streams. The vigorous movement launched by McDougall's "Social Psychology" has been followed by critical attack and counter attack, which has had echoes in almost every psychological journal, and has left the official status of the topic in grave doubt. Twenty years ago we could have said with some show of confidence: "Psychology teaches so and so with regard to the instincts". To-day the lines have been so sharply drawn that one feels a certain obliquity in his own position unless he is able to ally himself with either the deniers or the supporters of the instinct hypothesis. A divergence of this degree makes it interesting to inquire as to its broadest significance.

Most essentially it is a question of emphasizing aim or method in Social Psychology. If procedure is to be determined primarily by aim, we are inevitably forced to something like McDougall's position. The best guide to the ends to be sought by any science will always be common sense, and the demand that common sense clearly makes of Social Psychology is that it should give an account of behavior in which appetite and satisfaction are given paramount importance. The tremendous vogue of McDougall's instinct theory and the wide appeal of psychoanalysis rest on the fact that both give recognition to conation as the most essential aspect of human behavior. Yet however much the notion of in-

stinct may have in its favor as a pragmatic tool, it will always leave much to be desired in respect to the scientific ideal of clearness of definition. Until the social instincts can be defined with sufficient precision to provide for the possible use of quantitative method we shall always have a literature in which warring opinion bulks tremendously larger than controlled experiment.

In the face of this difficulty one can become so obsessed with the importance of scientific method as to eschew common sense and forego the very aims of his subject. This is to throw out the baby with the bath. The fact that habit formation is more readily available for laboratory study than are complex innate dispositions is no warrant for acting on the assumption that acquired responses are the unique subject matter in a scientific account of behavior. The fact that a physical stimulus is more accurately controllable than a social situation does not justify the effort to fit Social Psychology to the Procrustean bed of "stimulus" and "response".

In the long run the value of Social Psychology will depend largely on its success in treating of the categories of appetite and satisfaction. If these categories offer peculiar difficulties from the standpoint of accurate method, we must face those difficulties as best we can. The instinct literature, however open it may be to criticism in matters of detail, faces squarely the fundamental question as to what are the insistent dispositions toward certain forms of behavior, and how far they are related to innate conditions. An ostrich-like attitude on this question means the abandonment of essential aims and a resignation to painstaking futility. It was unfortunate for psychology that the study of memory became so exclusively preëmpted by the technique of nonsense syllables. It would be doubly unfortunate if social psychology were to become monopolized by a nonsense technique.

NEUROLOGISTS DO TRAVEL

A SYMPOSIUM held at the annual meeting of the American Neurological Association at Washington, on May 5, is worth noting. The occurrence is of interest not alone because of the papers of the three learned contributors, but, still more, because of the indication it showed of how far neurologists have traveled from home during the past decade. The symposium, in which Dr. William McDougall, Dr. C. M. Child and Dr. I. B. Watson took part, was listed on the program as one "On Be-

havior." Owing possibly to some misunderstanding on the part of those responsible for the subject as to what "behavior" is, as psychologically understood, and a resulting failure to inform the contributors of what was expected of them, only one of the papers dealt with behavior. Perhaps the neurologists thought it was some sort of chromozone (of which rumors, it is understood, have reached neurologists), or something too mystical for definition. However that may be, it didn't matter as it turned out, but resulted, for the better, in three most admirable contributions on as many different subjects. So it was all to the good. We can't help wondering, however, how far the knowledge of "behavior" and "behaviorism" has been clarified in the minds of the neurologists by the addresses, or what sort of notion of the subject they carried away.

The most interesting thing is that an association of American neurologists wanted, or even listened to such a symposium at all. Times have, indeed, changed. It would not require the fingers of two hands to count the years back when The American Neurological Association would have turned a deaf ear to any paper on a psychological subject even if it had tolerated such a desecration of its program. But younger men with more plastic minds and a wider appreciation and grasp of the problems of the mind and the nervous system are coming to the front.

As to the papers, all three captured the attention—one might say, captivated the "group-mind" of the meeting. Dr. McDougall led off with a paper having the curiosity-whetting title, "On the Track of the Oedipus Complex." It proved to be a masterly and conciliating exposition of the present day standing in the thought of progressive psychoanalysts of this controversial "complex" and its passing as a veritable active factor in psychology. But his address was mainly directed to diminishing the gulf between Freudians and other students of human nature by showing that the oedipus complex can no longer play the centrol rôle that has commonly been assigned to it by the psychoanalysts. He showed that recent utterances of leading writers of this school differ extremely in regard to this question; that Professor Freud himself in a recent article has rejected the view that it is present and active in normal *adults;* and that the reasoning by which Freud still seeks to maintain it as a universal feature of the infantile constitution is utterly unconvincing. He urged that a frank recognition of this state of affairs by the Freudians would remove one of the

chief difficulties in the way of a *rapprochement* between Freudians and other psychologists.

While frankly admitting, indeed, emphasizing that the oedipus complex may occur, he pointed out that its day had passed as a universal and fundamental concept of Freudian psychology.

Dr. McDougall plainly held the sympathetic attention of his audience and apparently won acceptance of his views, excepting of course from the "last ditchers", who would out-Freud himself by obstinate adherence to outgrown doctrines.

Dr. Child's paper, taking up the problem of heredity and environment, was chiefly concerned with an account of experimental observations which show how the normal course of development of the embryo may be profoundly altered by environmental influences. His general argument was to suggest that all germs or egg-cells are essentially alike and that their differences of development are due to the incidence of different environments within and without the organism.

Dr. Watson presented in admirable and taking fashion his well known views on behaviorism with which the readers of the JOURNAL are undoubtedly familiar and which need no further account here. His exposition of reflexes as adequate mechanistic explanations of behavior plainly appealed to the understanding of neurologists interested in organic processes and was much appreciated. Few probably had ever heard the explanations of the opposing orthodox school.

Verily a symposium covering such diverse fields of learning shows that neurologists do travel and that they are experiencing a renaissance of culture.

RESEARCH AT VINELAND

THE first research laboratory for the study of feeblemindedness was established at the Training School at Vineland in 1906. Under the able direction of Dr. Henry H. Goddard as director of the research department of this private institution for the care and treatment of mentally deficient children, remarkable advances were rapidly made in the scientific study of these unfortunates. In a period of less than ten years, Dr. Goddard produced studies of the greatest social and scientific significance which have had a profound influence on the development of psychology and education in this country. His contributions and those of his associates in such fields as the heredity of mental

deficiency, the measurement of intelligence, the education of mental defectives and the relation of mental deficiency to all sorts of social problems have amply justified the idea that public institutions are excellent laboratories for investigations in the various fields of social science in human welfare.

In recent years the research department at Vineland has been comparatively inactive. The large staff of workers, brought together by Dr. Goddard and disbanded by the unsettled period of the war, are now active in many parts of the country. Professor Johnstone, director of the Training School, is now planning to renew research work at Vineland on at least as large a scale as formerly, and the outline which he and his co-workers present in this issue of the JOURNAL gives some indication of the scope of the proposed fields of research. This program shows imagination, courage, and breadth of view. Its publication at this time should serve to stimulate interest in research in the field of abnormal psychology not only in other institutions for mental defectives, but also in our university research centers. Indeed, as we have learned, a modest foundation sufficient to insure permanency to the program has been obtained and close coöperation has been already assured with the public institutions of New Jersey and two universities. We extend the Training School at Vineland our cordial good wishes for a successful continuation of its endeavors and do not hesitate to predict that many of the investigations suggested will eventuate profitably for psychology and its correlated sciences.

PROGRESS IN EXPERIMENTS ON INTERPRETATION OF SPEECH BY TOUCH *

ROBERT H. GAULT
NORTHWESTERN UNIVERSITY†

IN THESE experiments, as is generally known, vocal vibrations are communicated mechanically to a sensitive tactual area upon the subject, at present to the palm of the hand. His problem is to learn to identify a given complex of cutaneous impressions with a meaning: a word or sentence.

During two years or more preceding last October the experiments were made almost exclusively upon hearing subjects. Since that time I have been using deaf and hard of hearing subjects and no other. There are seventeen subjects in all, at present, employed in the investigation. One of these is an instructor in Gallaudet College, an alert young man aged thirty-two. The remaining 16 are students in the college. They include five girls whose ages range from seventeen to twenty-three, and 11 boys of ages ranging from seventeen to twenty-seven. The average age of the 16 is 20¾ years.

The hearing of all subjects, determined by the audiometer test, ranges from 5—0 to 55—50. These figures represent, not capacity to hear and understand speech, but to hear elemental sounds only. There are seven in the group whose hearing in one or the other ear or in both, measured in this manner, is above 30. There is but one in whom the maximum of 55—50 occurs.

I acknowledge indebtedness in connection with this work for the help of my assistants, Mr. George Crane and Mr. Irving S. Fusfeld. Mr. Crane has taken a deal of initiative as experimenter with Group I, has made the necessary computations, and has kept the learning curves up to date. Mr. Fusfeld is making learning curves for each individual in relation to each sentence stimulus and for each word in the tactual vocabulary.

The subjects were selected from among volunteers. The chart indicates that they are all of high scholastic grade. They are also such as the casual observer would describe as alert, from

* Read at Annual Meeting of the American Psychological Association, Washington, D. C., December 30, 1924.

† (On leave with the National Research Council, Washington, D. C.)

the viewpoint of their activity as members of the student body at Gallaudet College.

DESCRIPTION OF SUBJECTS

Name	Age	Age When Deafness Occurred	Cause of Deafness	Per cent of Hearing on Audiometer Right ear	Left ear	Lip-reading	Average in Studies 1923–1924
F. B.	17	10	Cerebral Meningitis	10	15	Good	8.4
G. H.*	20	3	Spinal Meningitis	20	15	Fair	8.1
K. U.*	21	8–9	A fall	15	45	Fair	7.8
J. R.	19	1½	Cancer of the Ear	50	50	Good	8.9
H. L.*	17	9	?	55	45	Excellent	8.5
J. C.	21	7	Spinal Meningitis	5	5	Good	8.7
F. H.	32	7½	Spinal Meningitis	0	10	Excellent	
E. C.*	23	Congenital		35	40	Good	8.1
R. M.	21	Congenital		30	30	Fair	8.1
N. B.	23	6½	Scarlet Fever	5	5	Fair	7.4
A. R.	22	Infancy	Brain Fever	20	15		7.9
B. B.	20	15	Spinal Meningitis	20	20	Fair	8.2
M. N.*	19	Congenital		55	50		
L. L.	19	13	Spinal Meningitis	10	5	Good	8.9
C. F.	22	5	Spinal Meningitis	45	15	Good	8.6
J. P.	27	4–5	Paralysis of Auditory Nerve	30	35	Good	8.2
E. K.	22	1½	Spinal Meningitis	5	0	Good	8.5

Girls are indicated by *.

In the course of the survey of schools for the deaf now in progress tests have been made upon our subjects and upwards of 5,000 other students. These data will soon be available. To the present moment we have data from earlier tests upon but a few of our subjects. The figures are probably not significant because there is no means of comparing with others who are handicapped by deafness.

The whisper, watch and acumeter tests yield negative results in all these cases. But the loud voice can just be heard in one or the other ear by five of our subjects at a distance of six inches. No one has so much hearing in both ears. Three of these are among the four most successful in our experiments, but the fourth, who is second among the topmost four, gives negative results even in relation to the loudest voice at six inches.

Our subjects are divided for convience into three groups of five, six and six respectively.

APPARATUS

The apparatus consists of a transmitter that is adjusted to carry seven volts, and six receivers or earpieces in connection with it. There is therefore a receiver for each member of a group. Each subject holds one of these instruments tightly in his left hand with the aperture disclosing the diaphragm turned next to the palm. The transmitter is operated in the room adjoining that in which the subjects are seated. By speaking into it the experimenter can convey a tactual stimulus to the palms of all subjects in a group simultaneously.

STIMULI

The stimuli we have selected for groups designated II and III are, up to this moment, twenty sentences of six monosyllabic words each. Only four words are used a second time in sentences 1 to 10. Numbers 11 to 20 are composed of the words of the first ten in new combinations. Other stimuli that have recently been employed in relation to these groups will be mentioned later when we shall have had more experience with them.

Sentence stimuli:

1. Our work will be an aid.
2. Such terms are known as nouns.
3. I want to buy some cake.
4. Our ball team won five games.
5. The boys like to play ball.
6. Don't let Bob quit our side.
7. How do birds sing their song?
8. Please make a box for me.
9. John will not blame his friend.
10. Ray fears you will not come.
11. An aide will sing to you.
12. How I like a bird's song!
13. Bob will come to our ball.
14. Play some games for me, please.
15. Let not such work be quit.
16. The boys do not buy cake.
17. His side will want our Ray.
18. Make terms for a known friend.
19. Their team fears you blame John.
20. Five games are won for Ray.

Isolated words are employed as stimuli in experiments with Group I. These at present number 15. They are monosyllabic and are selected from the sentences above referred to. In addition, words of more than one syllable are often thrown in with the others for the purpose of stimulating interest.

THE PLAN IN RELATION TO GROUPS II AND III

Sentences 1 to 10 were the objects of drill until our best subjects could identify them with a high degree of accuracy. Thereupon we began working with the second ten. It was expected that in the course of practice upon the first ten sentences, words as individuals would have begun to sink into the personalities of the subjects, and that as a consequence, the learning curve in relation to the second ten would advance more rapidly than in relation to the first ten. It was anticipated that, once a fair degree of accuracy of identification had been attained, a new unpracticed word, could occasionally be introduced with a fair chance of its being recognized by aid of the context and the elements of which it is composed. Thus we hoped our subjects would acquire a facility in understanding speech by touch in much the same way as that by which many children learn to read: *i.e.*, by the sentence method.

The plan with relation to Group I is to set out with words uncombined in sentence form, to train the subjects in the recognition of these words in isolation, and then, step by step, to throw them into the form of sentences: a plan that suggests the word method of teaching and learning to read.

METHOD OF EXPERIMENT

At the outset the first two sentences were exposed upon a chart upon the wall in front of the subjects in Groups II and III. The experimenter at the transmitter read them in the known order, first second, first second, 10 times in succession while the subjects attended to the feel of the sentences in their palms. There was thus opportunity to associate the tactual and visual impressions of each sentence. Then the same sentences were read in an unknown order until ten stimuli had been presented. Between impressions about fifteen seconds lapsed. The subjects were directed to write within this interval, upon forms provided for the purpose, the number of the sentence that they thought they had just felt. After ten stimuli (which we designate a series) experimenter and subjects checked up. Each subject then knew

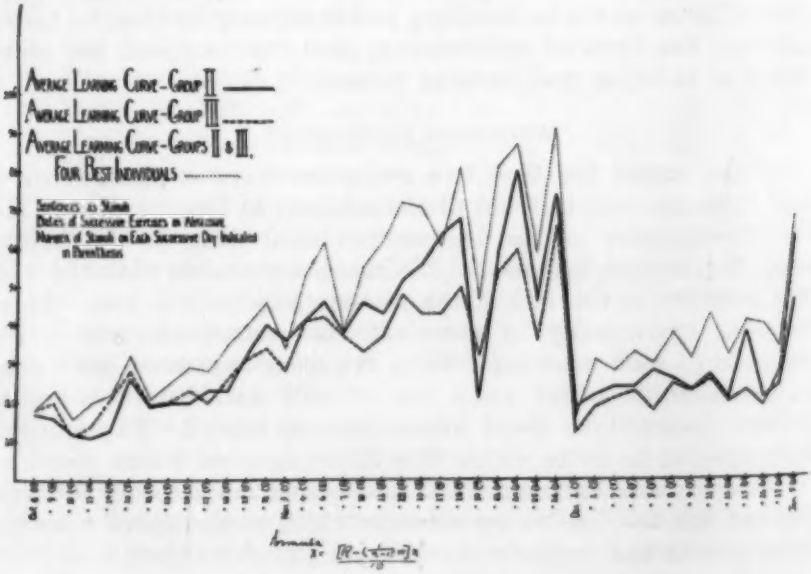
what he and his mates had accomplished so far. Then followed a brief drill and the presentation of another series and so on until ten series, or 100 stimuli, had been presented. This is the work of a session of thirty or thirty-five minutes.

As soon as the subjects had gained a fair mastery of these two sentences (a matter of one session) the third was added and the method already described was continued. In due course the fourth and fifth and finally the tenth sentences were added.

The method with Group I, which is dealing with words, is exactly similar to the foregoing.

RESULTS

The four best subjects in Groups II and III advanced their learning curve from approximately 18 points on the scale when there were two stimuli, to approximately 91 points when there were ten stimuli to identify on November 26. During this and the three preceding days the number of correct identifications made by the very best subject ranged from 91 to 96 in 100 impressions. The foregoing and the figure below indicate the course of learning in 28 sessions to November 26. The remainder of the figure is the learning curve with reference to sentences 11 to 20. It covers the period December 1 to January 5. The latter date was the first day of practice after the Christmas vacation which began on December 18.


Average Learning Curve-Group II
Average Learning Curve-Group III
Average Learning Curve-Groups II & III.
Four Best Individuals

CONTROLS

Several control experiments have been made in relation to these two groups.

1. Change of Rythm, Tempo and Emphasis.

With the exception of occasional days in early October I myself had invariably pronounced the stimuli. It is conceivable that the subjects might therefore have grown into the habit of identifying the stimuli by aid of rhythm, tempo and emphasis into which I inevitably fell, and by these means alone. To test this point, on November 19, I grossly altered all of these criteria. It was anticipated that there would be a drop in the number of correct identifications, and consequently in the learning curve. The three best subjects in Group II came down on their learning curve from an average of 75 to 26 points or from an average of 85 1/3 to 37 per cent of correct identifications. On this day there were nine stimuli in the list. By mere chance, therefore, they could have been right in around eleven cases. The three best in Group III fell on their learning curve from 81 to 52 points, and from 90 2/3 to 62 1/3 per cent of cases. This leaves a considerable margin of success that is evidently not attributable to the customary rhythm, tempo and emphasis.

2. Variety of Voices at the Transmitter.

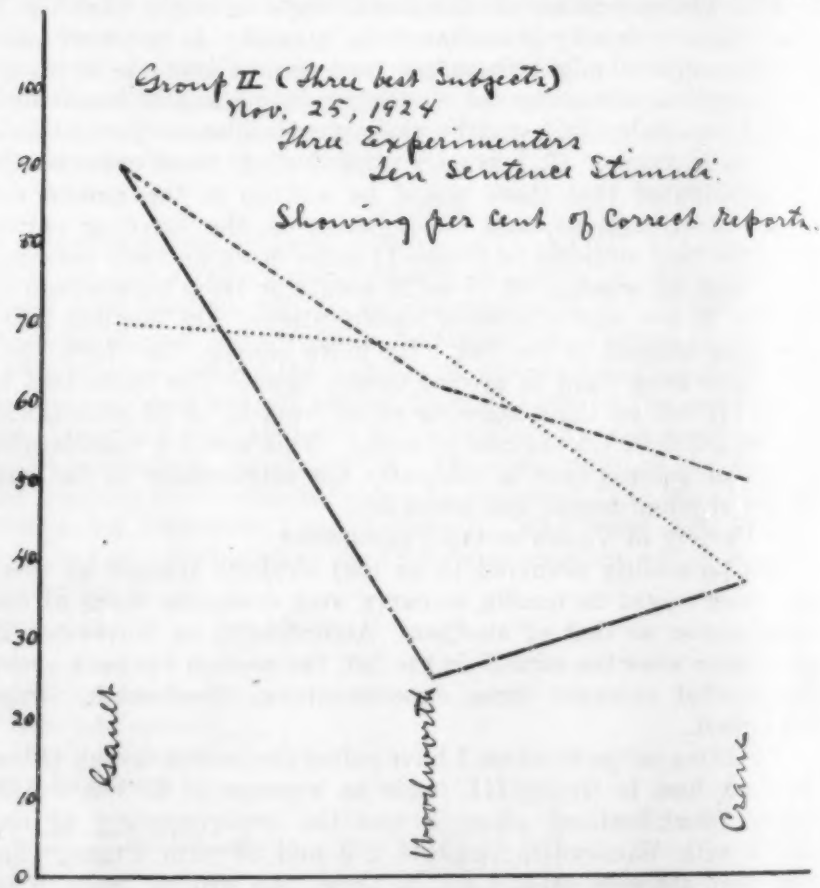
The possibility occurred to us that subjects trained as these have been might be unable to carry over from the voice of one experimenter to that of another. Accordingly, on November 25 when there were ten stimuli in the list, the session for each group was divided amongst three experimenters: Woodworth, Crane and myself.

The three subjects whom I have called the best in Group II and the three best in Group III, made an average of 83 1/3 and 90 correct identifications when I was the experimenter; 43 and 57 1/3 with Woodworth; and 44 2/3 and 65 with Crane. The four best subjects among all in these two groups made 92½, 52¼ and 60½ per cent with Gault, Woodworth and Crane respectively as experimenters. Evidently the subjects are not wholly dependent upon the voice of the experimenter with whom they happen to have had their practice.

The figures below represent the reactions of the *three* best subjects in each group.

3. There may occur to some critics the possibility that two or three of our subjects obtain sufficient auditory cues to aid them in identifying stimuli.

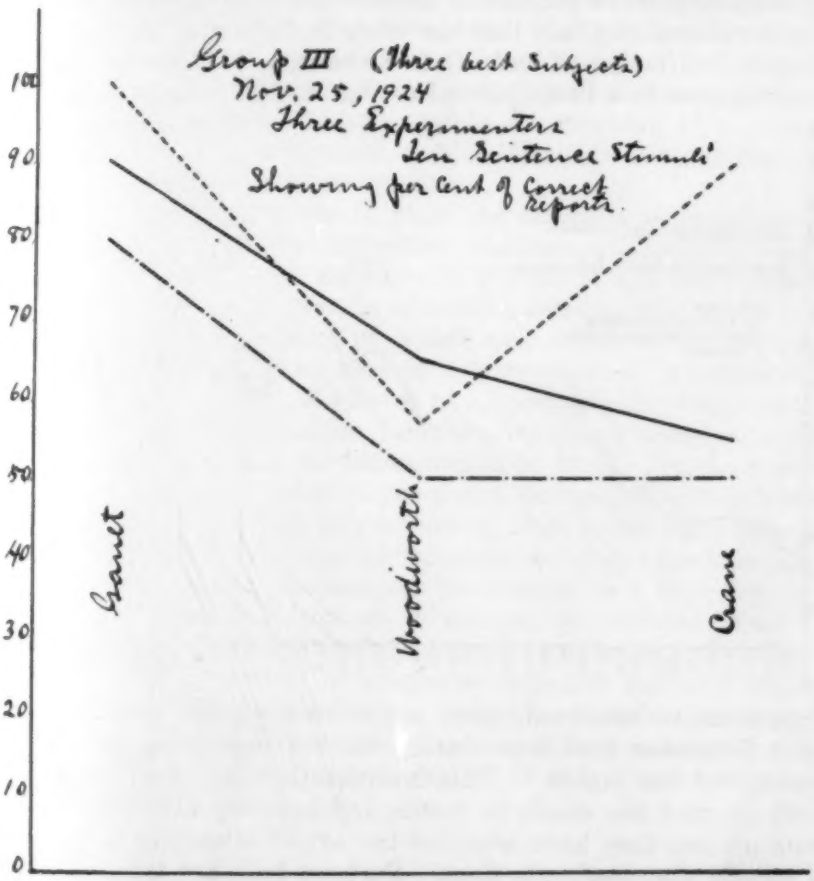
As a partial control for this hypothetical factor, on November 24 we removed the transmitter to a distant part of the building. It was then so isolated behind four doors and walls that a normal hearing person seated with the subjects in their room



could not hear the experimenter pronouncing the stimuli. In these circumstances, the learning curves, instead of declining, advanced appreciably.

Again, as a supplement to this test, we set up our transmitter and receivers in adjacent rooms as usual and had the subjects seated in their customary places but *not in contact with the receivers.* The experimenter pronounced the stimuli in the ordinary manner. After each impression the assistant asked the subjects to do their best to indicate what stimulus had just been

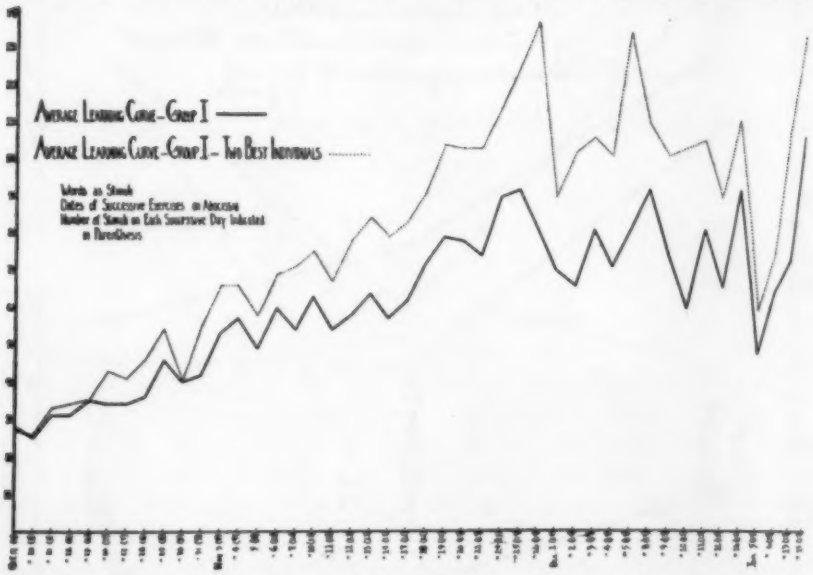
presented. They were requested to guess if they could do no more. This, on the hypothesis that if there were, to the subjects, any subliminal stimulation, it would load the guesses. But there was only one subject whose correct reports presented more than a



chance distribution (16 in 100 when there were 10 stimuli). This subject is the instructor mentioned earlier in this paper. His audiometer test is 0—10. There are only three others in the whole group who test so low as this, and it is beyond the range of imagination that he was influenced in the slightest degree by auditory stimuli. These controls must be regarded as having yielded negative results.

On December first we introduced the first five of the second group of ten sentences and from that date we have ignored the

original ten sentences entirely. As already stated the second group is composed of the old words. In spite of the fact that in presenting these stimuli we have cut in half the amount of preparatory exercises or drill that was customary at the corresponding stage of work in relation to the first group of sentence stimuli; in spite also of the fact that the work is difficult at this point as compared with that of early October because we have introduced five sentences in a lump instead of but one; in spite of these two


Average Learning Curve—Group I
Average Learning Curve—Group I—Two Best Individuals
Words as Stimuli
Dates of Successive Exercises on Abscissa
Number of Stimuli on Each Successive Day Indicated
on Perpendiculars

circumstances combined, more rapid learning has been the rule since December first than during the corresponding period following October eighth.* This means either that they have partially learned the words as words and have an advantage therefrom or that they have acquired the art of attending to the sort of stimuli that confronts them. Perhaps both are true.

Group I, we have already indicated, has been confined to exercises upon isolated words. Their work began on October 17. There are now 15 monosyllabic words in their tactual vocabulary, as follows: our, nouns, such, be, work, will, boys, aid, I, an, are, known, terms, you, said.

* It is worthy of mention in this place that during two weeks before Christmas we were working against a preholiday slump that was apparent in all campus activities. Immediately after the holidays our subjects showed that they had recovered from their slump. Their curves arose immediately and have been maintained at a high level.

The learning curve of the two best subjects in this group has risen approximately 100 points since the beginning.

The subjects in this group receive some drill daily in the recognition of sentences composed of the above named words; and not only so, but occasionally one or two polysyllabic words are introduced—words that have been wholly unpracticed: this for the purpose of stimulating interest, testing the subjects' ability to combine into new forms such tactual elements as he has already experienced, and to complete the meaning of a sentence by attending to the context of words. Records of these exercises do not appear in the learning curves.

We are making curves to show the rapidity of learning each individual word by the respective members of Group I, and of individual sentences by members of groups II and III. Ease or difficulty in this connection is, of course, relative only to the items in our limited vocabulary of words and our brief repertoire of sentences. Nevertheless, narrow as our range of information in this connection may be, it affords us a starting point for analytical work; *i.e.*, an investigation into the range of vowel-consonant combinations that may be distinguished by touch. Such an investigation, when carried out to the limits we contemplate will show us in advance, and with fair accuracy, what is the limit of possibility for acquiring the capacity of understanding speech by touch, assuming that our apparatus can be brought to a high degree of perfection. This assumption, I believe, is justified Such an analysis, when it is once brought toward completion, will afford a foundation for exercises of graduated difficulty that will be most useful for purposes of training. Indeed, what data we have at present relative to the ease of learning different sentences and words will be of some immediate use in selecting exercises for new groups of subjects.

DETECTING ABNORMAL BEHAVIOR

By DONALD A. LAIRD, Ph.D.
COLGATE UNIVERSITY PSYCHOLOGICAL LABORATORY

IN the diagnosis of psychopathic conditions the lack of objective criteria is oftentimes felt keenly. Some attempts have been made to provide these criteria with the aim of increasing the validity of judgments regarding the degree and direction of the mental deviation, and in addition to make it possible for a single psychopathologist to probe satisfactorily the behavior of a large group of persons to detect those in need of orthosis.

Such a test has been recently described.[1] This was developed out of a need found in connection with student health work at the University of Minnesota and was used as a test to "spot" students in need of orthosis.

The test which I shall describe has been developed from *Woodworth's Psychoneurotic Inventory* with a somewhat similar end in view. The first aim was to find a reliable, objective, and valid method of spotting persons in need of mental hygiene by applying the test to large groups. The second aim was to provide an instrument which would give a fairly precise quantitative measure of the degree and kind of deviation.

Several tests were tried during the past three years, and on the basis of the data obtained from the various devices at the University of Iowa, University of Wyoming, Yale College, and Washburn College (through the coöperation of Dr. Karl Menninger) the one presented on these pages has been evolved. The studies of the reliability and objectivity of the test justify the publication of the instrument in its present experimental form. These data pertaining to its reliability and validity will be published shortly by Ralph K. Hoitsma.

The assumption underlying the present method is that all the traits which are characteristic of mental ill-health are but exaggerations of traits of behavior present in all humans. The trend of modern psychiatry would indicate that this is a sound assumption.

The method used is to have those traits which are significant

[1] Journal of the A. M. A., November 22, 1924, p. 1666.

as indicators of mental deviation so described for each individual that one can determine whether or not the person being examined deviates from the normal in these traits. Questions are asked regarding reactions in the large type to the left. These are answered by making a check mark along the dotted line beside each question at the point which best describes the individual's actual behavior, feelings, or thoughts, as the case may be. Descriptive phrases are printed underneath the dotted line which make it possible for one with the comprehension of a high school senior to describe himself with considerable reliability and validity.[2]

For each question the check marks for over two thousand persons have been thrown into a distribution curve, as shown in Figs. 4 and 5. Then the upper quartile of each distribution has been determined and stencils made which indicate this upper fourth for each question. This stencil can be applied to the test forms filled out by a patient or suspect and the traits in which he unwittingly describes himself as deviating from normal can be readily determined. (See Fig. 6.)

The questions are arranged in diagnostic groupings, corresponding to the generally accepted classical entities. (I would much rather have followed the classification of Kempf.) In Schedule B 1, for instance, division I is for psychasthenoid, II for schizoid, III for neurasthenoid, IV for hysteroid. Schedule C 1 is arranged for introversion.

It has not been feasible to include some behavior traits which, while important in themselves, would by their very nature cause embarrassment in a mixed group and prevent the fullest use of the test.

The tendencies of humans to over- or underestimate themselves have been minimized by avoiding as much as possible the use of phrases and descriptions which smack of goodness or badness. Moreover the stencils are self-correcting for these tendencies inasmuch as they have been determined by actual distributions and not by any arbitrary criteria.[3]

Tentative "paper diagnoses" may be made by summarizing the total deviations of an individual in each division of the blanks and comparing these with the findings for the total groups tested, from which norms have been obtained. This is largely justified only through its statistical convenience of comparing individuals

[2] A summary of nonintelligence test and methods is given by Simmons in the Journal of Educational Psychology for November, 1924.

[3] See my papers in Industrial Management for September and November, 1924.

and groups of different individuals, as, for instance, college men and college women. Data on such a comparison will be published shortly by Prof. Miriam C. Gould of Vassar and Mr. T. McClumpha of Colgate, and by Prof. Linus Kline of Skidmore and Mr. McClumpha.

The use of the test in spotting students in need of mental orthosis has been very gratifying. Whether it has found *all* in need of this attention or not is, of course, undeterminable; but it has found a large number for whom there has been a distinct need for orthosis and who would otherwise probably never have been noticed until something serious had occurred.

At present the tests are in use at Ohio State University, the University of Washington, Ohio University, Purdue University, Colgate University, Northwestern University, and Vassar and Olivet Colleges. In addition it is being used in one of the federal hospitals and by several psychiatrists in private practice for evaluating their patients with reference to a fairly normal group and for keeping cases records in a quantitative form. It is being translated into Czechoslovakian. A "third person" scale for use in industry is being prepared in this laboratory.

Data from different racial, industrial, educational, and other groups will be ready for publication shortly.

In the large type to the left (look at the blank) questions are asked. You will answer these by making a check mark like this: / along the dotted line at the place which indicates the right answer for you. One end of this dotted line might be thought of as low, the other high, with each dot representing a step from one extreme to the other.

To help you locate yourself some descriptive phrases are printed below the dotted line. It may be that none of these phrases describe you, in which case the check mark may be placed between two of the phrases. Check at any dot, using the phrases to help you locate the proper dot easily.

We want to know about your personality for the last few months; say the last six or so. After you read each question in the larger type and then the descriptive phrases think how you have been the past half year—not how you would liked to have been or how you think the ideal person should have been, but *how you actually were.*

You may use the margins and blank spaces to write in any explanation you want to, but always make a check mark some place along each line of dots.

After you are through you may study it over again and make any changes you think necessary. Do not erase, however; just cross out your first check marks and make new ones.

Remember: You may check any place along the dotted line.

Think how *you* have been *the past half year.*

FIG. 1. The instructions.

PERSONAL INVENTORY

Schedule B1.

I.					
101. Have you been bothered by blushing?	not to know it		only when "bawled out" or such		many times each day
102. Have you usually known what you want to do next?	spent most of time deciding	deliberated only important cases			never any hesitancy
103. Have you been troubled with the idea that people are watching you on the street?	never any thought of it		when wearing new clothes or such		usually felt being watched
104. Have you been afraid of responsibility?	avoided it entirely	accepted when forced upon			sought it
105. Have you found your way about easily in familiar places?	lost several times	found self wandering few times			always clear
106. Have you got used to new places quickly?	no trouble after once around		restless and turned around		much confusion for some time
107. Have you felt a strong desire to take things that were not yours?	fought it off with difficulty	have wanted to take many things			no such desire at all
108. Have you felt a strong desire to set fire to things?	hard to overcome				no such desire at all
109. Have you been able to stand the sight of blood, or the thought of it?	made panicky		not repulsive		sought it and enjoyed it
110. Have you indulged in alcoholic liquors?	drunk several times	felt craving to get drunk	took occasional drink	abstained	abstained no desire
111. Have you felt like jumping off when on a high place?	kept from with great effort	mild impulse to do so			no fear or impulse to jump
112. Have you had a queer feeling as if you were not your old self?	none	have felt it slightly	recurrent		persistent
113. Has your mind wandered so that you lost track of what you were doing?	other thoughts interfered and bothered continually		occasional day dream hampered		never lost track
114. Have your feelings kept changing from happy to sad and sad to happy without any reason?	often	moods change sometimes			never
115. Have you been troubled nights with the idea that someone is following you?	usually	only on dark nights			not at all
116. Has it made you uneasy to sit in a small room with the door shut?	not a bit		sometimes made uneasy		could not bear to
117. Have you worried when you had an unfinished job on your hands?	let them rest without qualms		only about important ones		bothered and worried by all unfinished work
118. Have you felt as if someone were hypnotising you or getting you under their control?	not at all		on rare occasions		a persistent feeling

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FIG. 2a.

119. Have you had the feeling that people are reading your thoughts?	not at all		on rare occasions	a persistent feeling
120. Have useless thoughts kept coming into your mind to bother you?	other thoughts continually interfered with work and bothered		occasional day dreams bumper	never lost track
121. Have you been able to do the little chores of the day without worrying about them?	did them without a thought	thought about them but no worry		worried about most of them
122. Have you thought you must think a thing over several times before you dropped it?	thought everything over several times	only more important things		dropped everything with little thought
123. Have you had a great pressure in or about the head?	constantly and severely	at times		none
124. Have you worried about little things?	usually worried about something	worried about serious things		never a worry
125. Have you been bothered by a feeling that things are not real?	not at all		a time or two	continually felt it
126. Have you been troubled with fear of being crushed in a crowd?	usually when in a crowd	when actually being "squeezed"		never
127. Has it made you uneasy to cross a bridge over a river?	took great effort to cross	when bridge was shaky		no thought of it
128. Has it made you uneasy to cross a wide street or open square?	very uneasy every time	only in heavy traffic		not a bit
129. Have you had trouble walking in the dark?	never	only when dark and stumbled	occasionally	every time
130. Have you had difficulty making up your mind?	not the least difficulty anytime	over important things only		on everything
131. Have you experienced a great mental shock?	none	few disappointments but no shock		very great shock
132. Have you been able to stand disgusting smells, or the thought of them?	fainted or nauseated by foul odors	stood all but worst ones		stood all without any effort
II				
201. Have you been bothered with shyness?	almost impossible to meet or be with people	very self-conscious		not in the least
202. Have you been able to do good work while people are looking on?	impossible to	if they are not looking to criticise		never notice them
203. Have your interests changed frequently?	very stable	changes in minor ones		changed almost daily
204. Has it been easy to get you cross or grouchy?	on the least provocation	when things go very wrong		never cross or grouchy
205. Has it been easy to make you angry?	very irritable most of the time	kept temper under control		rarely felt temper

FIG. 2b.

206.	Has it been easy to make you laugh?	would smile but not laugh	laughed at a very good joke	laughed freely at slightest humor
207.	Did you see a vision?	several times	only in day dreams	none
208.	Have you preferred to be alone?	always sought company	enjoyed company but did not seek it	always sought solitude
209.	Have you tired of others quickly?	invariably	if I did not like them	rarely
210.	Have you made friends easily?	with everyone I met	with a few I liked	with practically no one
211	Have you tired of amusements quickly?	all soon lost their interest	not of those I have always liked	could not get enough of them
212.	Have you found books more interesting than folks?	invariably	some books more interesting than some people	folks always more interesting
213.	Have you cared to go to parties and dances?	did not enjoy them	if it was the right crowd	went to many and enjoyed all
214.	Have you been rattled easily?	easily and many times	on a few occasions	nothing rattled me
III				
301.	Have you felt well and strong most of the time?	"peppy" all the time	well most of the time	poorly all of the time
302	Have you had spells of dizziness?	several severe spells	dizzy a time or two when suddenly sitting up	none
303.	Have you felt sad or low spirited?	not at all	some spells of low spirits	most of the time
304.	Have you had the sensation of falling when going to sleep?	almost every night	a night or two	but at all
305.	Have ideas run through your head so you could not go to sleep?	a long while almost nightly	when excited or under strain	but at all
306.	Has your head ached on one side?	never	at times	severely and almost daily
307	Have you twitched your face, neck, or shoulders? (Underline which)	almost a fixed habit		not to know or be told of it
308	Has your heart thumped in your ears so you could not go to sleep?	nightly for a long time	when excited or under strain	never
309.	Has your appetite been good?	ate heartily of all kinds	poor appetite some days	very poor appetite daily
310.	Has work tired you quickly?	not in the least	some work tired quickly	all work tired quickly

FIG. 2e.

311.	Have you slept well most of the time?	very poorly every night	poorly some		sound and restful sleep regularly
312.	Have you felt well rested on awakening mornings?	"peppy" and well rested		felt fatigued some mornings	tired and achy every morning
313.	Have you had queer, unpleasant feelings in any part of the body?	daily		a time or two	none
314.	Have you had many headaches?	severe ones daily	many bad ones		none
315.	Have you had pains in any part of the body? Where?	none		a time or two	severe ones daily
316.	Have you had indigestion	none		after eating wrong food	severe attacks
317.	Have you been frightened in the middle of the night?	badly several times			none
318.	Have you had nightmare?	badly several times			none
319.	Have you been bothered by vomiting?	none			several times
320.	Have you had sexual dreams?	almost nightly	few mild ones		none
321.	Have you walked in your sleep?	not to know it		once or twice	nightly
322.	Have you usually gone to a physician or taken medicine or treatments when you felt that you were not well?	taken medicine or home treatment daily	watch health closely		avoid physicians, medicine and treatments
IV.					
401.	Have you fainted?	no		once or twice	several times
402.	Have you been blind, half-blind, deaf, or unable to talk? (Underline which)	severely or several times			no
403.	Have you been bothered by fluttering of the heart?	almost daily	when exercising violently		not at all
404.	Have you had an arm or leg paralyzed?	no		lost control for short period	several times, or severely
405.	Have you had the feeling of suffocating?	not at all		sometimes hard to get breath	frequent feeling of suffocation
406.	Have you lost your memory for a time?	no	only forgetting exam answers and such		complete for a day or so
407.	Have you had convulsions?	occasional severe ones			none

FIG. 2d.

PERSONAL INVENTORY

Schedule C1.

1. How have you worked at the ordinary tasks of the day?	continuously until completed		shifted from one to another	brief spurts of work
2. How have possible misfortunes entered into your thinking?	worried about them	usually thought what might happen	few apprehensions	imperturbable
3. Have your feelings been easily hurt by remarks or actions referring to you?	feelings easily hurt	unusually noticed intentions of others		gave them no attention
4. How have you considered the feelings of others?	outspoken	told truth, regardless of feelings		always careful not to hurt them
5. How have you acted and felt at social affairs?	tried to keep in background	let others talk, entertain etc.	liked to do entertaining	strove for leadership
6. Have you remembered all the errands and details of the daily routine?	continually forgetting	occasionally forgetful		never absent-minded
7. In social conversation how have you been?	always talking	an easy talker	preferred listening to others	did little more than reply
8. How have you decided upon matters of daily conduct?	deliberated most things	searched for good reason in important cases		followed first impulse
9. How have you been about making loans?	gave to anyone who asked	loaned when approval was desired	made certain of security	never loaned
10. How have you taken to discipline and commands?	followed as a matter of course	considered reasons for obeying	rebelled inwardly, but obeyed	ignored or disobeyed
11. What about a diary?	complete record kept	recorded important events		do not keep one
12. How have you responded when praised?	worked same as usual	sometimes worked better		always worked much better
13. How have you felt when praised?	thought over it seriously	quickly forgot it		never noticed praise

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FIG 3a.

14. How have you moved when walking, talking, dressing, etc?	slowly and deliberately	seldom in a hurry		quickly, usually in a hurry
15. Have you studied the motives of others?	seldom gave them a thought		tried to unmask important motives	suspicious of most motives
16. How have you talked when with others?	replied when spoken to, little more	thought more than talked	fluently	talked a great deal
17. How are your beliefs in politics, religion, social change, etc?	tend to nonconformity	think some changes needed	little thought to them	accept those of leaders
18. Have you been inclined to work out things alone?	rarely asked for aid	worked mostly unaided	did not hesitate to seek aid	got help in most cases
19. What attention have you given dress and personal appearance?	unconcerned about fashions, etc.		selected mostly for appearance	close attention to dress
20. How would you describe your actions?	always fast, quick	usually in a hurry		generally slow and easy
21. What care have you taken of your property (books, watches, clothes, etc.)?	repaired, polished and keep close watch of	cared for best liked ones		generally neglectful
22. How have your likes for athletics and things intellectual compared?	much preferred intellectual contests		preferred athletics	buoyant in all physical contests
23. How have you felt when you lost a contest or "date" or made a poor recitation?	no thought given it		thought about it for some time	greatly upset; brooded over it
24. Have you unburdened your troubles and worries?	freely to anyone		only to close friends or relatives	kept them to myself
25. What use have you made of day dreams?	enjoyed them most of the time	practical ones, not ideal or romantic		used imagination, but not day-dream
26. How have you considered the feelings of others?	careful not to hurt them		spoke my thoughts regardless of feelings	outspoken
27. Have you made friends with the opposite sex?	avoided them	felt uncomfortable with them	enjoyed their company	sought their company
28. How have you acted in dangerous or embarrassing situations?	always cool		kept composed with effort	lost head easily

FIG. 3b.

29. How have you felt in front of strangers or a large crowd?	as if being watched or talked about	gave more attention to the work than to myself		ignored them entirely
30. How have you acted in times when physical courage was needed?	reckless, no fears	cautious, avoided unnecessary danger		panicky, deserted it
31. Have you experienced fine emotions and sentiments?	easily moved to tears	sympathized readily	unmoved by movie, fiction, or real life	
32. Have you found it easy to speak in public?	spoke on every possible occasion	can with ease	hard to express self in public	avoided it
33. Have possible troubles bothered you?	easy-going	somewhat apprehensive		given to worry
34. How have you acted in times when mental courage was needed?	cool and deliberate	calmed self by reasoning	day-dreamed, imagined it was all over	broke down; gave up
35. How have you been at selling things?	delighted in convincing customer	have sold many	will take orders, but not sell	avoided selling
36. Have you worked with others?	almost never	preferred to work alone	liked working with others	always sought work with others
37. What sort of work have you liked best?	coarse, rough work		liked exact, delicate	preferred very painstaking
38. Have you liked to convince others, argue, etc.?	looked for such chances	defended own opinions	dropped arguments quickly	avoided all arguments
39. How do you compare with your chosen associates intellectually?	much superior to associates	about equal		feel much inferior to them
40. How have you protected your funds?	never loan	loaned when certain of payment		loaned whenever asked, if had it
41. How have you been about making friends?	very cautious	must know them a long time first	get acquainted easily	made friends with everyone
42. How do you compare with your associates physically?	inferior to them	about equal		much inferior
43. Have your moods changed without apparent cause?	often changed from gloomy to hilarious		kept in fairly uniform spirits	moods always the same

FIG. 3c.

44. Have your moods changed with cause?	responded quickly	must be adequate reason		nothing changed them
45. How high a value have you placed on yourself and your abilities?	much better than the average			very modest estimation
46. How about blushing?	readily, on every occasion	once in a while		never noticed it
47. Have you expressed yourself better in speech or in writing?	best in writing	preferred writing	talk easier and better than writing	
48. Have you given much attention to form and style in literature?	critical and appreciative	noticed mistakes	read only because of interest	read just to pass time
49. Have you rewritten your letters before mailing?	all letters re written	rewrote some		let the first draft go
50. Have you talked to yourself?	not to know about it		when worried or thinking hard	almost a fixed habit
51. How have you met the obligations of your conscience?	prompt in keeping, even at personal sacrifice		somewhat tardy and lax	satisfied to avoid embarrassment
52. What have you done when things went wrong?	felt sorrow and pity for self	tried to rectify them		gave them little thought
53. How have you been in sharing your things with others?	have in rare cases	have, but reluctantly		have at sacrifice of own interests

FIG. 3d.

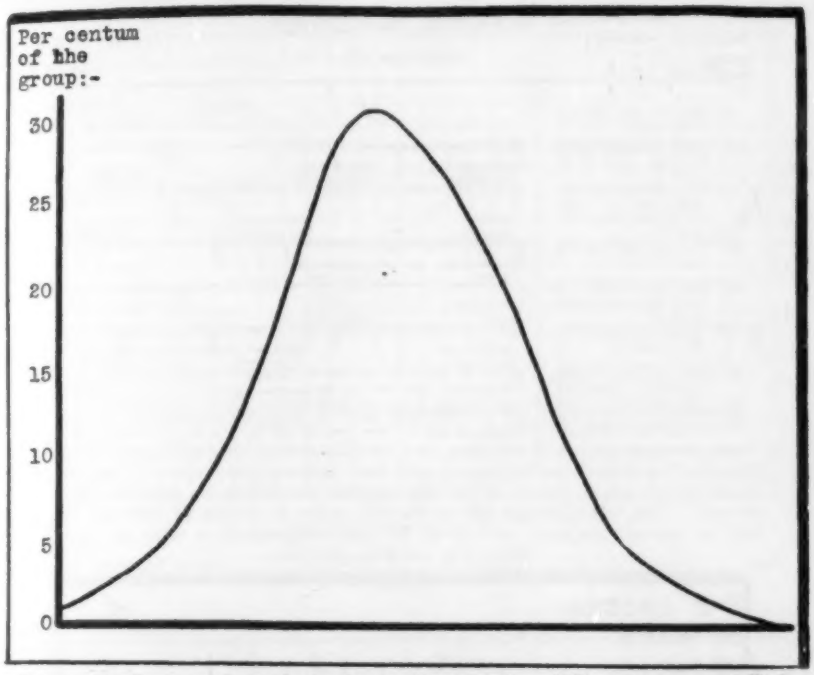


FIG. 4. Distribution of check marks to the question, "How have you talked when with others?"

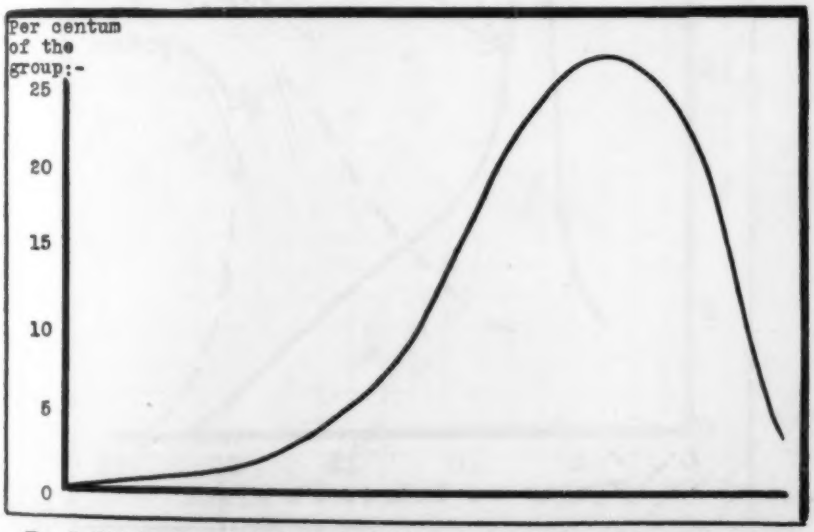
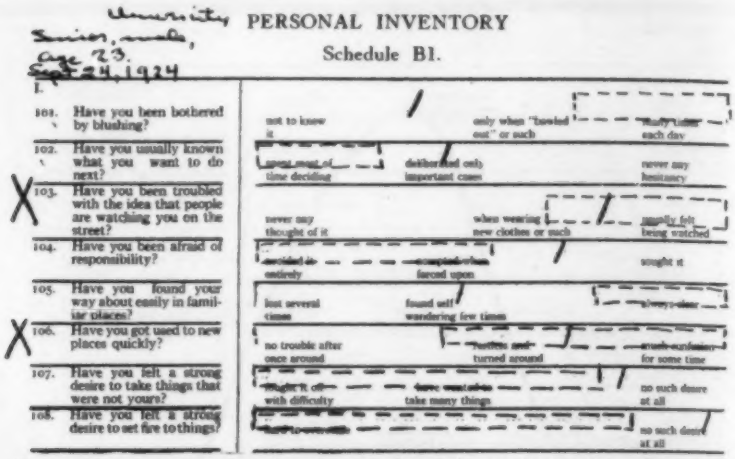


FIG. 5. Distribution of check marks to the question, "How have you considered the feeling of others?"


PERSONAL INVENTORY

Schedule B1.

101.	Have you been bothered by blushing?	not to know it	only when "treated out" or such
102.	Have you usually known what you want to do next?	time deciding	only important cases
X 103.	Have you been troubled with the idea that people are watching you on the street?	never any thought of it	when wearing new clothes or such
104.	Have you been afraid of responsibility?	entirely	forced upon
105.	Have you found your way about easily in familiar places?	lost several times	found self wandering few times
X 106.	Have you got used to new places quickly?	no trouble after once around	turned around
107.	Have you felt a strong desire to take things that were not yours?	with difficulty	take many things
108.	Have you felt a strong desire to set fire to things?		

FIG. 6. The dotted rectangles on each line indicate the section of the line in which the upper fourth of the distribution has fallen, or deviation from normal. The check marks this individual made to questions 103 and 106 fall in this sympotmatic section of the line, accordingly a cross is placed before the question number.

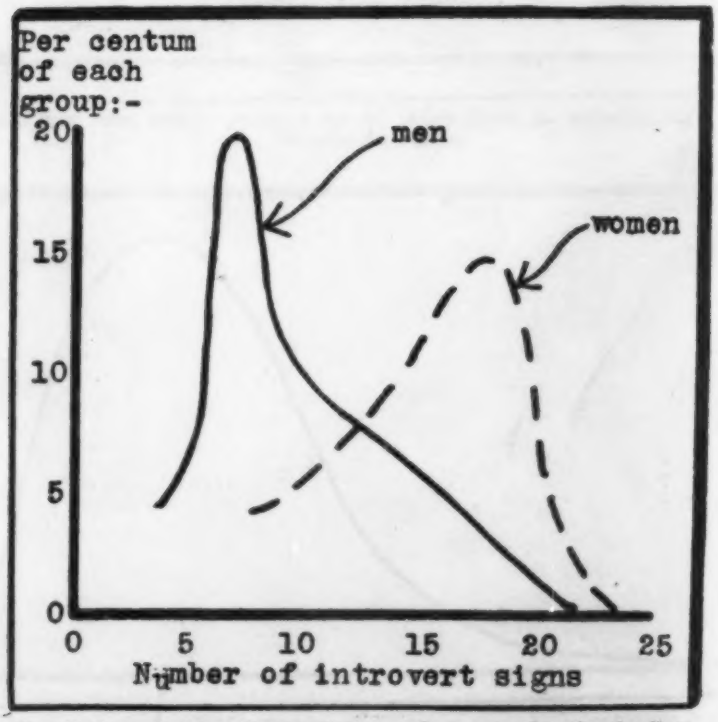


FIG. 7. A comparison of men and women from a co-educational college in the total number of deviations from normal on schedule CI.

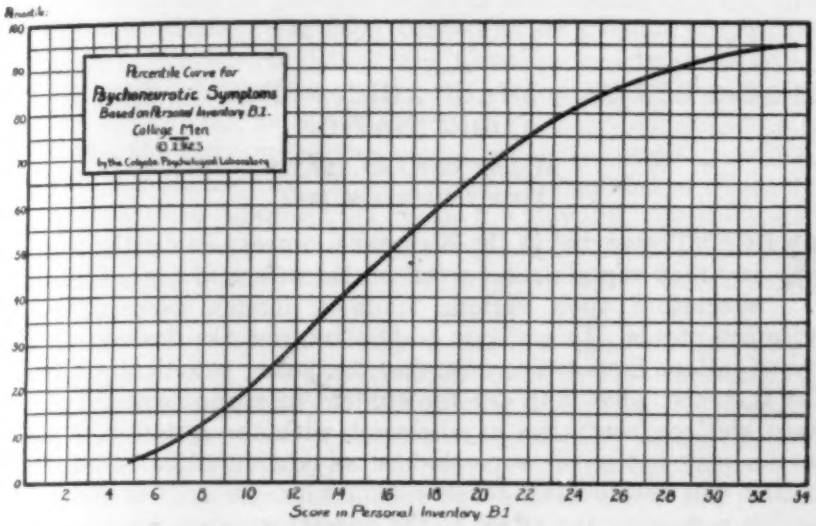


FIG. 8. Percentile curve for schedule B1. A similar curve for women is now available.

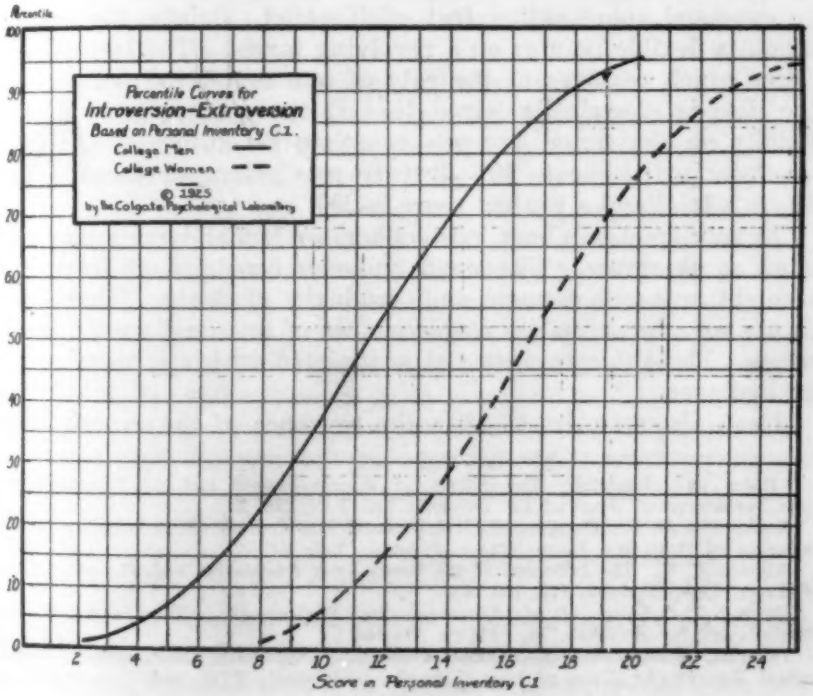


FIG. 9. Percentile curve for schedule C1.

THE EFFECT OF A SMALL AUDIENCE UPON EYE-HAND COORDINATION

By LEE EDWARD TRAVIS
STATE UNIVERSITY OF IOWA

RECENT reports [1] in the literature impress one with the feeling that experimental work on the effect of an audience or spectators upon various kinds of human performance is quite acceptable. In addition to this interest the finding of such investigations have a direct bearing upon very practical problems. For instance, what help can the student of piano hope to receive when she confronts the psychologist with the question, Does a person play better or worse before an audience? or What satisfaction will the football coach obtain when he applies for information regarding the effect of the spectators upon his team?

This study bears specifically upon these two problems which have to do with neuromuscular coördination. The test used was the eye-hand coördination test of Koerth.[2] Briefly, the test is to hold a flexible pointer on a revolving target. The target is on a disc which revolves at the rate of one revolution per second. The disc is electrically wired that if the pointer is held continually on the target for one complete revolution of the disc, a counter will indicate 10. Twenty revolutions or seconds constitute a trial and a perfect score is 200.

Twenty freshmen boys, one sophomore boy and one junior boy, acted as observers. The small audience consisted of from four to eight upper classmen and graduate students. There was always an approximately equal number of men and women in the group. The subjects were not acquainted with any members of the audience.

Each observer practiced in the presence of the experimenter

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[1] Gates and Resaland. The Effect of Encouragement and of Discouragement upon Performance. Jour. of Ed. Psychol., Vol. XIV, No. 1.

Laird, Donald A. Changes in Motor Control and Individual Variations under the Influence of Razzing. Journ. Exper. Psychol., Vol. VI, No. 3.

Allport, F. H. The Influence of the Group upon Association and Thought. Journ. of Exper. Psychol., 1920, III, 159-182.

Gates. The Effect of an Audience upon Performance. The Journ. of Abn. Psychol. and Soc. Psychol., 18, 1923-24, 334-344.

[2] Koerth, Wilhelmine. A Pursuit Apparatus: Eye-hand Coördination. Psychological Monographs, Univ. of Iowa. Studies in Psychol., VIII, 288.

twenty trials a day. His learning curve was plotted each day and when for two consecutive days there was no general rise in the curve it was considered that O was about as expert as he would ever be. This is probably an accurate criterion of complete mastery of the task as the learning of eye-hand coördination is very rapid, the learning curve showing an early abrupt ascension. When it thus seemed that O had attained his maximum efficiency, the audience was admitted. But on the day that O performed before his audience, he was required to do five trials under the usual experimental conditions, just prior to the introduction of the spectators.

The audience was essentially a passive one. Its members seated themselves in a semi-circle in front of O, who was standing at his accustomed place for the carrying out of the experiment. O was told that here was a number of individuals who wished to observe him follow the target. Unknown to O, the spectators had been asked to intently watch him but not to make a sufficient distraction by means of noises, laughing, or talking to forcibly draw his attention from the experiment. Nearly every observer displayed various signs of confusion and uneasiness, but no attempt was made to study these. Ten trials were done in the presence of the onlookers.

In this study there are several ways to make comparisons between the performance in the presence of spectators and that when working alone. It would have been permissible to compare the average of the forty scores of the last two days plus the five attained just before the introduction of the audience with the average of the ten scores received in the presence of the audience. Or a legitimate comparison would have been between the average of the five trials just before the appearance of onlookers and the average of the ten during the presence of onlookers. A third way to compare the observer's performance under the social situation with that under the nonsocial is to compare the average of the highest ten consecutive scores received while working alone with the average of the ten scores received while working in the presence of spectators. This latter method is the one adopted because it comes more nearly comparing the maximum ability under a nonsocial environment with actual performance under social pressure. On the other hand, it is a rather strict comparison and the one that will put the results in the worst possible light because each observer has several chances to make his best ten consecutive scores when working alone as compared with only

one chance to do his best in the social situation. That is to say, the average score given the subject under the social conditions is probably representative of his mean ability under these conditions while the average score given O when working alone is more representative of his greatest ability under nonsocial conditions.

Another check on the comparative performances is to compare the highest score of the nonsocial situation with the highest score of the social situation.

The data are presented in Table I.

TABLE I

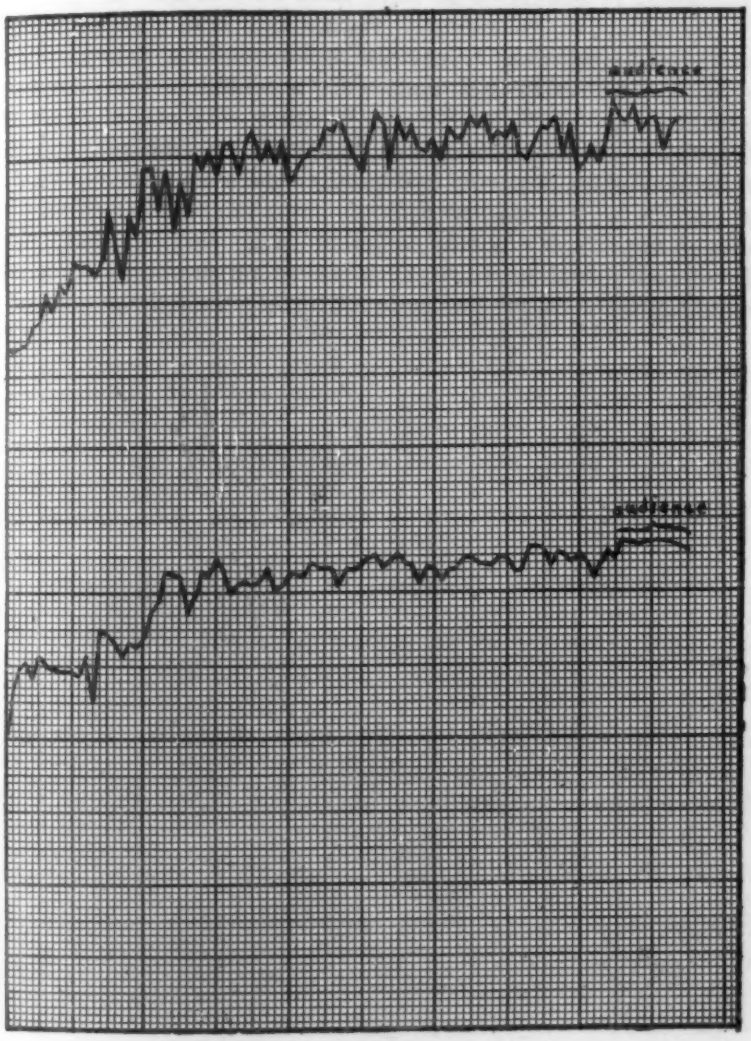
	Average for highest ten consecutive scores when working alone	Average of the ten scores in the presence of an audience	Highest scores when working alone	Highest score in the presence of an audience
A	188.2	197.1	196	200
B	175.8	178.7	189	189
C	180.5	189.2	192	195
D	171.0	181.8	181	197
E	173.7	179.8	185	190
F	179.3	184.9	188	192
G	193.2	189.4	200	196
H	164.2	168.1	176	187
I	188.4	186.1	195	195
J	162.5	163.9	174	176
K	152.5	136.8	171	153
L	170.3	175.6	187	187
M	134.0	134.1	145	157
N	175.3	175.7	182	197
O	167.0	175.3	177	181
P	184.2	186.4	197	193
Q	173.3	190.0	187	200
R	175.2	184.5	189	196
S	166.4	180.5	180	195
T	176.7	187.0	192	194
U	174.8	190.3	195	199
V	174.2	168.0	185	186

Here it is seen that 18 of the 22 individuals or 81.8 per cent had a higher average for the ten scores in the presence of an audience than for the highest ten consecutive scores when working alone. Sixteen or 72.7 per cent obtained their highest scores while working in the presence of the audience; 3 or 13.6 per cent had scores during the performance in the presence of the audience that were equal to the highest obtained when working alone; and 3 or 13.6 per cent had scores in the presence of spectators which were below the highest attained when working alone.

These facts seem quite conclusive until we compare the mean of the first column of figures with that of the second column and the mean of the third column of figures with that of the fourth column.

Let M_I = mean of first column of figures
M_{II} = mean of second column of figures
M_{III} = mean of third column of figures
and M_{IV} = mean of fourth column of figures.

Then we have $M_{II} - M_I = 177.42 - 172.76 = 4.66 \pm 2.68$ and $M_{IV} - M_{III} = 188.86 - 184.68 = 4.18 \pm 2.41$. Statistically the P.E. of the difference in each case is too large for these differences to



mean much. It is believed, however, that the limited number of cases is responsible for these large probable errors of the differences and should there be a hundred cases the differences between the means under comparison would be large enough to be reliable.

This criticism can be offered in regard to the majority of similar studies. That some observers show superior coördination in the presence of the group, there can be no doubt. The performances of two individuals have been plotted and are presented below in order to graphically verify the last statement. The ordinate scale indicates scores while the abscissa indicates trials. The last ten scores in each case were received in the presence of the spectators.

By way of summary, it seems legitimate to conclude that there is an indication of superior eye-hand coördination among the subjects tested in a social situation. Statistically considered the degree of superiority is not sufficient to be very reliable. Yet a study of individual performances leaves no doubt as to the fact that the influence of the audience materially raises the score.

THE INDEPENDENCE OF SOCIAL PSYCHOLOGY

By WILSON D. WALLIS
UNIVERSITY OF MINNESOTA

MUCH of the controversy regarding the field of social psychology still hovers about the reality of group and group mind as opposed to an assumed more fundamental reality, the individual, who composes group and group mind. Is group ever anything more than the sum of the individuals composing it, is group mind more than a figure of speech, does it have an independence comparable with that of individual mind? Are explanations of group behavior to be found in the group, or only by studying the individuals of which the group is composed? In this paper we shall maintain the thesis that the group is a reality over and above the individuals who compose it; that there is a social dimension to mind; that individual psychology is not a guide to the behavior of the group. Our justification for these conclusions will be our ability to predict social phenomena by a study of social phenomena, and the corresponding inability to predict them by a study of individual psychology. Where phenomena can be dealt with as relatively self-sufficient, it is proper to attribute realty to them.

I

The reality of the group as an entity becomes apparent as soon as we treat it as such. Only when so treated can its reality be discovered. The American nation can be grasped and treated as an entity in the world of nations, a world in which each nation is an entity of similar order.

A group is an entity when it shows persistence of qualities and when the parts of which it is composed are mutually interdependent. In such a case it functions as a unity, and so is a reality.

These are, in general character, though not in details of quality, the traits which enable us to recognize an aggregate as also an individual. If we started with a microscopic view of a human being, seeing only cells and cell aggregates, it would be exceedingly difficult to discover the interrelations of this huge community of cells and envisage all of them in a functioning entity. Imagine the difficulty which a microscopically-eyed microbe would have in

exploring the human organism and attempting to discover a unity in his huge universe. His description of the huge macrocosm as a functioning unity with a realty as great as that of the individual cells encountered by the microbe during his long excursion would be an act of faith and of higher synthesis surpassing the astronomer's conception of a solar system. We solve the problem by refusing to recognize it; that is, we start with unity in the human individual. So far as cells are concerned, we are synthesists when we speak of a human being as an individual; yet we treat this synthesis as though it were a refined analysis, the discovery of the smallest human reality. The reason why the concept of a human individual is so easy is that we start with it, not acknowledging the synthesis.

In the realm of individual psychology we do the same thing. We talk of Woodrow Wilson as though we were referring to an individual. Psychologically as well as morphologically Woodrow Wilson is not an individual but a billion individuals changing every moment from birth to death. By a mere word we disregard the shifting panorama and speak of this phantasmagoria as though the multitude were a simple reality discoverable by mere reference to person and place. As a matter of fact it is only by an astoundingly bold synthesis that we can secure individuality out of the billion different persons connoted by the reference "Woodrow Wilson". We secure it by simply taking it for granted; which is easy, and justifiable.

I do not object to this procedure, but merely point out that it is a procedure, and that the procedure itself usually escapes our knowledge just because it is an overly familiar procedure. Far from objecting to it, I would be ready to admit that a solar system is as much a reality as is a grain of sand, and that it is as true to say that a solar system gives us grains of sand as to say that grains of sand give us a solar system. In other words, the things discovered by analysis possess no higher reality than those discovered by synthesis. Analysis and synthesis are merely different methods of approaching the study of things, for becoming acquainted with the nature of the world in which we live, or which lives in us.

Yet here, I suspect, is the rock on which the social psychologists and the individual psychologists split. Those who find that individual psychology is the only psychology, unwittingly are paying homage to the superior reality of (assumed) analysis, a superiority which the social psychologists do not admit. The latter

would not admit that cells possess a higher order of reality than does a living organism composed of these selfsame cells. The existence and the reality of the cells, it might be argued, depend as much upon the existence and the reality of the organism, as the organism depends upon the cells.

II

There is, then, a social dimension comparable with individual dimension. As you can read continuity and interdependence into individual psychology, so you can read it into the psychology, that is, into the behavior, of a unified group. In a Dakota tribe, for example, there is continuity between past and present and an interdependence between parts of the group. The action of the war party cannot be understood apart from the traditions of the tribe, is incomprehensible apart from the opinions entertained by contemporaries. Change in any portion of group life is apt to affect all other portions; no group activity is carried on independently of other group activities. In a word, group activity can be understood only by studying group activity, for we are dealing here with a self-sufficient social reality.

III

The scientific basis for social psychology lies in the fact that by means of it one can predict the action of the group or of individuals in it in so far as they act as members of the group. If I am acquainted with the concepts current in the tribe, I can predict what a Dakota Indian will do when face to face with a will-o'-the-wisp, with an enemy, with a buffalo, with a spider. We may safely defy any individual psychologist who does not take account of the social atmosphere to make that prediction. He can treat the Indian as an individual only after he has allowed for the presence of the social environment. Only then can he tell what the Indian will do.

If the political observer can give me a surer prediction of the attitude Lloyd George will take toward unemployment or toward cancellation of war debts than the psychologist can do, then the political observer has hold of some kind of reality which, in so far, is superior to the reality which the individual psychologist has; and I will follow him who most often leads to the goal.

No study of the mechanism or of the psychology of speech will explain why one man talks English and another Chinese; why one

attaches to his words a different order of meanings than that of the other. One must know history and the history of the respective languages to discover that. So far as history enables me to predict what I will find in a given time and place it is a science and it is useful. Moreover, in so far as it does this, it has hold of a reality which I prefer, for that purpose, to any reality which the physiologist or psychologist possesses.

IV

Individual psychology, then, cannot give us group behavior, any more than a study of cells can explain the difference in behavior of two individuals, A and B. The behavior of A and B can be understood only when we transcend the component cells, for an acquaintance with the cells of the respective individuals does not enable us to anticipate the behavior of the individuals under given circumstances. Even if it did so, the synthetic individual would still have reality if by studying his behavior as an individual we could predict his behavior as an individual. The fact is that the student of group activities can disregard individuals, can predict behavior of the group and of members of the group without acquaintance with the respective individuals. In a word, we need to know only their social attributes, their place in the group, and we then can disregard their individual attributes, as truly as the individual psychologist can disregard the respective lengths of Woodrow Wilson's toe nails when he signed the Versailles treaty. Here, in group life, the social attributes override the individual attributes. After a certain kind of dream the Dakota Indian will perform a Sun Dance in true tribal style, though the details of performance may be individually determined. Given the circumstance of place and person and you can predict that the man of our culture will wear a white collar. You do not have to wait until you investigate his tastes in the matter of collars or of colors.

Where individual differences, and time and place, are relatively unimportant in the behavior of an individual, that is, where you can predict action of a member of a group without taking any of these three factors into account, there we have the operation of a reality which transcends individual psychology. This is the field of social psychology. In that world the individual as an individual is relatively unimportant, for it is not his individual attributes which determine his behavior, but rather the attributes of the group.

THE PSYCHOLOGY OF SOCIAL INSTITUTIONS

By CHARLES H. JUDD
UNIVERSITY OF CHICAGO

SOCIAL psychology has suffered throughout its history from two defects. First, it has never established itself in method or content as distinct from individual psychology. McDougall's earlier work was nothing more than a description of individual instincts. The influence of this work has been so great that many of the more recent writers have been equally content to look upon society as nothing more than an aggregation of individuals held together by the instinct of gregariousness.

Perhaps the most explicit statement in the literature of the view that social psychology is nothing but a phase of individual psychology is that which appears in Professor Allport's recent volume.[1] He says (p. 4):

"The standpoint of this book may be concisely stated as follows. There is no psychology of groups which is not essentially and entirely a psychology of individuals. Social psychology must not be placed in contradiction to the psychology of the individual; *it is a part of the psychology of the individual,* whose behavior it studies in relation to that sector of his environment comprised by his fellows. His biological needs are the ends toward which his social behavior is a developed means. Within his organism are provided all the mechanisms by which social behavior is explained."

The second defect of treatises on social psychology is that they are very vague in their descriptions of the mechanism by which individuals are united into social groups. The concept of imitation employed by Tarde and the concept of suggestion used by Ross are mere names for the fact that individuals are in some way affected by their fellow-beings. Both imitation and suggestion are wholly inadequate as principles for the explanation of modern civilization, and there can be no satisfactory social psychology which does not make clear the method by which human minds have produced through coöperation the institutions which are collectively called civilization.

[1] Floyd Henry Allport, Social Psychology. Boston: Houghton Mifflin Company, 1924. Pp. xiv+454.

The need for a new type of social psychology was never more clearly recognized than at the present time. We live in a period when the sciences of economics, of government, of history and education are maturing rapidly. All these sciences which deal with human nature acting in groups are calling upon psychology to supply the foundational principles needed for the explanation of the facts with which they deal. There is no type of individual psychology which satisfies this demand, and the vague abstract principles of imitation and suggestion have proved to be wholly unusable.

It is the thesis of this paper that the required reform of social psychology can be effected through the consideration of social institutions. Language and literature, money and economic values, government and social conventions are facts in the world just as truly as are trees and mountains and climate. These social institutions are objective in the sense that they exist outside of individuals. They are no less objective than the facts of physical nature. While social institutions have extraindividual and super-individual reality, they owe their origin, as contrasted with the realities of the physical world, to the action of minds. Language, for example, is the product of coöperative effort on the part of intelligent beings. Government is a creation of men living in groups. Money is a material device evolved through long periods of racial experience and now so influential in controlling conduct that one sometimes forgets that money is a human invention and regards it as a thing.

These social creations epitomize in their present forms all the intelligence which has entered into the social evolution which brought them forth. Language is the crystallized result of the discriminative thinking through which the race has passed. Each new member of the race who is born into civilized society finds language present in a highly perfected form ready to influence and guide his behavior just as he finds paved highways and climate present to his senses and influential in directing his life.

It is these social institutions which constitute the appropriate subject-matter for social psychology. One does not need to resort to any vague concepts like imitation and suggestion when one recognizes the fact that tools and language and social conventions are the influences which surround the individual who lives in a civilized community. Nor can one ever be satisfied to limit one's thinking about mental life to instincts and individual traits when

one has come to recognize how vastly the sweep of social thinking is wider than the range of individual mental life.

Let us follow for purposes of illustration one concrete case. Civilized men have learned to be punctual. Think of the extent to which each one of us is dependent on the devices by which time is measured and by means of which engagements are prearranged for definite points in the future. Take, for example, our meeting here. From a great variety of different centers we came on trains which started on scheduled time and avoided accidents by taking the right of way as determined by train-dispatchers who operate chiefly by dictating the time of train movements. After we reached our destinations we followed the dictates of certain cunningly devised mechanisms with which social evolution has provided each of us in the form of our watches; we came here and are prepared to respond to the pointed demands of our program committee that at a certain hour we shall one after the other deliver ourselves of series of ideas carefully limited to fifteen minutes. In addition to all these elaborate timings of our intellectual lives we have acted on certain other schedules. We foregather for our meals, we meet our intimate friends, all according to the modern civilized scheme of being on time.

So accustomed are we to the practice and idea of punctuality that it is difficult for us to realize that punctuality and the precise measurement of time are not natural to the untrained individual. Primitive man is controlled in his behavior by certain gross happenings, such as sunrise and sunset, by winter and summer, but it required long periods of social evolution before the sun-dial or the water-clock or the pendulum and spring came into existence. These mechanical devices were perfected by intelligent men. They are not primarily physical objects. They are appliances made up of physical substances, but their essence is the intelligent application of materials to the satisfaction of human demands. Men invented clocks because they wanted to make their human relations precise. They found that living together was and is facilitated by punctuality and so they evolved all that is necessary to establish punctuality as a social control of individual behavior.

Once clocks and the social recognition of punctuality were brought into the world, we find that individual behavior is guided into channels which it would not otherwise have followed. There are cultivated in every social community habits of regularity on the part of the members of the community which are emphatically

not instinctive or inherited. These acquired habits of regular conduct become so fixed through long practice that ultimately they are indistinguishable from the habits which grow out of instincts. Anyone who has seen a man impatiently waiting for a belated train or still more for a belated meal will realize how firm a hold the habit of punctuality may take on a civilized being and how completely emotional life may be dominated by a form of reaction which has nothing to do with instinct.

Not only is the habit of punctuality sufficiently powerful when once it is established to control individual thinking and emotions, but the person who has learned to be punctual promptly becomes a center for social propaganda in favor of punctuality in others. Social institutions spread through the vigorous promotion of these institutions by those who have come under their sway.

Innumerable examples might be added to this which has been described. Consider the institution of weights and measures. There is a long history behind our grain and pound. It is only in very modern times that the foot and the yard have been taken up by science and established by precise methods.

Or think of such a custom as passing on the right. There is no reason except convention why we should pass on the right. In fact, we know that peoples no less intelligent and civilized than we pass on the left. This is not an instinctive mode of passing. It is not natural. It is conventional, acquired by the individual because the social group to which he belongs predetermined his modes of behavior in the interests of social harmony.

There is a very proper sense in which tools may be regarded as social institutions. Each generation profits by the mechanical acquisitions of its predecessors until finally we each use freely machines which are so complex that we cannot understand their structures. We do not find it at all unnatural to take advantage in this way of intellectual creations which the animals never think of employing. We are content to regard ourselves as parts of a civilization for which we have sympathy but for which we frequently have no comprehension.

How anyone who has given even superficial attention to the facts of civilization can hold with Professor Allport that social psychology is nothing but a subdivision of individual psychology, I confess I do not understand. How anyone can be content with McDougall to spend long hours discussing instincts and omit all reference to trade and literature, to laws and religion, to music and painting, passes my understanding. The essence of social

existence is not to be found in the instincts of isolated individuals but in those accumulations of intellectual capital which make it impossible for the individual to live except as he becomes a part of the coöperating group which has brought this intellectual capital into being and is now devoting a vast amount of its energy to solidifying its holdings. If there is any order of importance in the world, the social group with its possessions must surely be thought of as enormously more significant than the individual; and social behavior and social institutions must be recognized as more permanent than any individual traits.

The proposal of this paper is that social psychology be renamed psychology of social institutions. This will at once free us from the vagueness which has up to this time attached to the general term social psychology. The name psychology of social institutions defines both the content and method of explanation to be used by this most fundamental of the social sciences. When social institutions are studied, one immediately gets away from the sense organs and muscular reactions of particular individuals. One gets away from the instincts and biological adaptations which have been so sadly overworked of late. One has a new and fruitful field for psychological analysis. Not only so, but one finds as a result of study of institutions a method of explaining civilization. Civilization is nothing more nor less than a complex of social institutions. It is the general matrix in which individual life is imbedded and from which individual life derives its major tendencies and its most important characteristics.

Incidentally it may be pointed out that this conception of civilization will prove enormously productive, not only for psychology but for the individual social sciences. At the present time these sciences are floundering because they fail, for the most part, to understand that the institutions with which they deal are products of human intelligences acting coöperatively. Consider, for example, the way in which the science of economics discusses money. Many of the phrases used by the economists leave the impression on the reader's mind that money is a thing. Money is explained by the fact that mental is permanent, divisible, and always available in the trades. There is little or no consideration in economics of the minds which have coöperated in developing money.

The science of philology treats language in like fashion as though words were objects. The very objectivity of language and its super-individualistic character have inhibited the students of

language from seeking an explanation of the phenomena with which they deal in such a science of human thinking as the psychologists have been able up to this time to supply. The result is that psychology has been little interested in language because its origin lies outside of individual mental life, and the philologist has been very little interested in psychology because that science has concerned itself exclusively with individual mental abilities and traits.

For my own work in educational psychology the name and concept psychology of social institutions is most suggestive. Education is a process of inducting pupils into social modes of expression and thought. There is a vast amount of shallow reasoning abroad in the educational world as a result of the current interest of individual psychology in instincts and personal traits. There is too often a neglect of the fundamental fact that the individual must become a part of civilized society by acquiring certain social arts. What education needs to-day is a sure foundation in a new type of psychology, the psychology of language, of number, of weights and measures, of government and of trade and industry—in short, a psychology of social institutions.

A RESEARCH PROGRAM FOR THE STUDY OF FEEBLE-MINDEDNESS*

By E. R. JOHNSTONE, M.Sc.
DIRECTOR, THE TRAINING SCHOOL AT VINELAND, N. J.

NO comprehensive program of research with the feebleminded has yet been published. From time to time suggestions or small programs have been made by scientists whose work was in some special field, and fifteen or sixteen years ago, shortly after Goddard began his work at Vineland, a rather elaborate outline was made. But that was not as much a definite program of research in general as it was a program for the development of the work at The Training School, embracing many lines of investigation.

In the past years more or less of isolated work has been done, beginning with that of Wilmarth (Gross Anatomy of the Brain), Barr (External Stigmata), Witmer (Recognition and Study of Mental Defects among School Children), Rogers (Opening of the First Institutional Psychological Laboratory), and gradually extending in scope and numbers of workers to the present day. There was no active coöperation or even attempt to reach a common end on the part of any of these workers.

A dozen years ago in New Jersey there was a mild form of coöperation between the Hospital for the Insane, the State Village for Epileptics, and the Institutions for the Feebleminded, in occa-

* This program was prepared with the assistance of Dr. Edgar A. Doll and Dr. George S. Stevenson as an outline of the major fields and problems of research that might most profitably be investigated. While the Vineland laboratory can not hope immediately to carry out or even fully enter upon so ambitious a program, we do hope that a systematic statement of the more important problems may stimulate coöperative research along these broad lines. In preparing the program we have had the generous assistance of such authorities as Dr. Henry A. Cotton, Dr. M. J. Greenman, Prof. H. C. Warren, Prof. E. G. Conklin, Dr. Adolf Meyer, Dr. Donaldson, Mr. Geo. B. Thorn, and many others. In particular we have had the cordial and active support of many members of the American Psychological Association, such as Prof. Rudolf Pintner, Prof. G. M. Whipple, Prof. C. S. Berry and many others. Mr. Lloyd N. Yepsen gave special assistance in collecting these suggestions. The program is founded on and is a further development of a similar program prepared by Dr. Henry H. Goddard in 1912. That program has been brought to date and elaborated on the direct request of the Board of Trustees of The Training School at Vineland to determine the advisability of continuing the research work of The Training School on a more comprehensive scale. We offer the program for publication two years after its preparation, after repeated urgings, on the ground that it may be of definite assistance to medical and psychological experimentation.

sional committee meetings between Cotton, Weeks, Goddard and others. That too, however, led only to the development of research in the various institutions along quite independent lines.

It seems now as though there should be a comprehensive view of the fields in which research might be conducted, and of the types of institutions which might work together in research, which shall have for its basis the feebleminded, looking primarily for the cause or causes of feeblemindedness.

We believe that the investigations must extend into the realms of medicine, psychology, and anthropology or social science. In the realm of scientific medicine we may draw upon the fields of general biology, embryology, biochemistry, endocrinology, neurology, psychiatry, clinical pathology, post-mortem pathology, internal medicine, enterology, and pediatrics, at least. In the realm of psychology, structural or behavioristic, we may draw upon the fields of general, experimental, comparative, clinical, genetic, educational and abnormal psychology. And in the realm of anthropology, we may draw upon the fields of anthropometry, ethnology, and social science.

Bearing in mind these realms of investigation and fields of inquiry, we believe that in order to present the matter fully and to present a clear, comprehensive program which may be a basis for research for a number of years, conferences should be held with the laboratories and men working in each of the above fields, asking two major questions: (a) What can a study of the feebleminded offer in that specific field? (b) What can the work in that specific field offer in the study of the feebleminded? Properly written up, evaluated and presented, such investigations should prove of immense value to any individual or organization undertaking any line of investigation into the problems of feeblemindedness.

In anticipation of such a comprehensive study we have already secured the assurance of coöperation from thirty or more leading scientists of America. From the administrative angle we have secured the coöperation of the New Jersey State Department of Institutions and Agencies, The New Jersey State Department of Public Instruction, and the New Jersey State Department of Public Health. We have also been assured of the active coöperation of most of the state institutions of New Jersey. In all of these institutions there are groups of feebleminded whose social deficiency or maladjustment may be due to weaknesses that may

be scientifically studied in the realms of medicine, psychology or anthropology and social science.

The whole field of coöperation in any state could be greatly extended so as to coördinate the work of other state departments and public and private institutions and laboratories with the state and private universities or colleges. Such coöperation could and should be extended from state department to state department, institution to institution, and laboratory to laboratory outside as well as within a given state. These institutions and laboratories might open their doors for investigators from a single institution to carry out its studies in any or all of them. The beginnings of such coördinated studies have already been discussed with several institutions both in New Jersey and in other states and the idea received with enthusiasm. By having many fields from which to choose, the superintendent or directing body of an institution or laboratory may select the particular line of investigation that has his greatest interest.

For example let us consider the present situation in New Jersey. It is quite probable that the State Colony for Feebleminded Male Idiots, Woodbine, N. J., would wish to take up the study of idiots from the standpoint of comparative psychology, as suggested by Professor Conklin, Professor Marvin, and Dr. Donaldson; that the State Institution of Feebleminded Women, Vineland, N. J., would wish to carry out studies in the field of emotional disturbances among defective delinquent girls, that hereditary, social and genetic studies of actual families and individuals in that institution are also feasible, there being several cases of mothers and babies there at the present time; that the New Jersey State Prison, Trenton, N. J., would wish to continue and to elaborate the studies which it has already begun in the investigation of temperament and personality; that the State Home for Boys, Jamesburg, N. J., would wish to continue its experiments on the classification of juvenile delinquents according to mental types (manual, social, verbal, volitional, emotional), and to continue its studies in experimental education, both for the correction and the prevention of delinquency; that the Epileptic Village, Skillman, N. J., would be anxious to resume its studies on the course of mental development and deterioration among epileptics, which bear such a close relation to the general study of feeblemindedness.

These studies could be carried out by coördination and coöperation with the State Department of Institutions and Agencies.

The New Jersey State Department of Public Instruction has just entered upon a program of state-wide testing of children in the fifth grade, which, if successful, will demand extension throughout all grades in the public schools. The present movement is in the nature of an experiment, with logical extensions in the fields of health of school children and experimental education, leading toward differential education in accordance with the many types of individual differences revealed among children by this program of testing and classification. It seems inevitable that should this part of the program be successful, the institutional investigations in the realms of medicine and anthropology will again follow the leads opened up by the psychological studies, carrying them into the public schools.

We believe that vast results may be accomplished in this and other states by an extended development of the unofficial committee movement that has been going on in the State of New Jersey for the past year and a half, whereby an unofficial committee has been gradually coördinating the work of The Training School research laboratory with the laboratories of the other institutions of the State, and with the work of the Departments of Institutions and Agencies, and Public Instruction. At the present time we do not recommend that this be made a set official matter; by its very looseness it can advance or recede as circumstances demand, moving forward only as it finds active coöperation, and stepping aside in order to avoid opposition. This committee is expected to definitize the programs but will not in any sense interfere with the autonomy of each coöperating organization.

These examples, with reference to only two state departments of New Jersey show the tremendous possibilities of a comprehensive research program coördinated through an unofficial committee and leading eventually to coöperation with the other State Departments of Health, Labor, Rehabilitation, and others. Such coöperation for the prosecution of scientific research could undoubtedly be developed in, or extended to, other states. No single state and no small group of coöperating laboratories can hope to make very rapid progress in so complex a problem.

This research program has been drawn in such a way as to eliminate those phases of research with which we must necessarily be concerned but upon which we do not wish to enter because it seems better to confine our program to the specific problem of feeblemindedness. All phases of the programs require detailed elaboration before actual work is begun.

THE PROGRAM

Many years ago a committee consisting of Dr. Goddard, Dr. Cotton of the State Hospital for the Insane at Trenton, Dr. Weeks of the State Village for Epileptics and the superintendents of the two institutions for the feebleminded at Vineland, met from time to time to develop research work in New Jersey. Since that time all of the above institutions have carried on independent lines of investigation. It is hoped now that the old coöperation may be revived, and already the two Vineland institutions have agreed to coördinate their work to the end that more effective steps may be taken toward the discovering of the causes of feeblemindedness, the checking of the consequences and the amelioration of the condition through better methods of care, treatment and training, which will come from greater knowledge.

From the opening of the laboratory at The Training School sixteen years ago until the present year, most of the research problems attempted have been along psychological lines. For short periods, problems in biochemistry and psychopathology were attempted and some of the work of Goddard, Doll and Porteus was in the field of anthropology, but by far the greatest amount of work was done in the field of psychology.

In order to be sure of our next step in the research work, we directed letters to a large number of scientific men and women who know something of the conditions and possibilities here at Vineland. We held several conferences here and in Philadelphia, and Dr. Doll, Dr. Stevenson, Mr. Thorn and the Director spent several days at the Marine Biological Laboratory, Wood's Hole, Mass., discussing our program with a number of men there. Dr. Stevenson spent a day with several men in New York. We are therefore ready to present our tentative plans and program as follows:

Fields and Methods:

Three major fields of inquiry are essential to a comprehensive study of feeblemindedness, (1) medicine, (2) psychology and (3) anthropology. Two principal methods of approach may be followed, (a) the general study of groups of carefully selected individuals, (b) the intensive study of particular or isolated phenomena.

I. MEDICAL SCIENCE

In the realm of scientific medicine there are many fields from which we may draw in seeking a solution of the problems of

feeblemindedness. Embryology, biochemistry, endocrinology, neurology, psychiatry, clinical pathology, post-mortem pathology, internal medicine, enterology and pediatrics all can make their contribution. Of course we do not think of calling upon all of these at once, but we wish to keep them before us in order to take advantage of every opportunity to coöperate with any men or laboratories that are taking up any of these lines of investigation as they relate to feeblemindedness, and also so that we may open our doors to anyone who wishes to pursue the studies of his field in our laboratory and with our children. Also we desire to make available to others any data or information our laboratory can furnish.

In the past, comparatively little has been done in this realm. In 1912 and 1913 some work was done in biochemistry and pathology. Later in conjunction with the Wistar Institute of Anatomy, microscopic and chemical studies of the brain and other tissues were made. Also some experiments were made with some of the glandular extracts and there was a short period in which some of our " children " were under psychiatric observation, but all of this was on individuals or comparatively small groups.

We have received a number of suggestions as to studies to be made from those with whom we have consulted, the most important of which are—

A. *Internal Stigmata:*

The feebleminded are more subject to obvious anomalies of development such as are known as stigmata of degeneration. The feebleminded are, in their total function, of a lower type of integration than are normals. The work in anthropometry in our own laboratory several years ago showed that the feebleminded have a tendency toward infantile physical types. This was supported on the biochemical side, and from other sources we have occasion to believe that structurally the feebleminded organism shows some tendency toward infantility and other constitutional inferiorities. We know that internal anomalies as well as external stigmata occur in humans. We know that functional anomalies do likewise, and we have some evidence that these anomalies influence the total integration. The following questions are therefore raised—

1. Do these anomalies occur more frequently in the feebleminded?
2. If so, can we relate such anomalies to defective integration?
3. If so, can we influence integration by influencing anomalies?

We propose to take homogeneous groups of subjects and controls; to make studies of organ systems and anomalies by any functional and morphological methods available, *e.g.*, by complete X-ray pictures of individuals or by the routine X-ray studies of one organ or organ-system in a series of cases. The circulatory, respiratory and digestive systems lend themselves readily to such studies.

B. *Focal Infection:*

It is suggested that there is the possibility that development is retarded and mental growth prevented, as well as perverted, through the influence of focal infections, either directly or by way of the endocrines. We propose to consult with Dr. Henry A. Cotton before going further in this field.

C. *The Ductless Glands:*

Comparatively little is known with certainty of the rôle played by the endocrine glands, but the striking results obtained in the condition known as cretinism stimulates us to more extended and more intensive studies. There is a strong belief in many quarters that mongolism is caused by some disfunction of one or more of the ductless glands. We have a large number of mongolian children. Special studies of the morphology and functions of the thyroid, parathyroid, suprarenal, pituitary, gonads and pancreas, have been suggested. These studies are also being held in abeyance pending further consultation and more definite leads.

D. *Behavior and Development:*

Behavior may be measured and described in psychological terms but must be interpreted in medical terms. One of our advisers says, "The problem of feeblemindedness is first the problem of behavior; second, a problem of mentality, and third, a problem of physiology and anatomy." In connection with these studies of behavior and development Conklin suggests the importance of critical stages in development (periods of vulnerability) when slight disturbances have important effects. We believe the correlation of studies of behavior and development with post mortem examination should be investigated. We are gathering data for these studies in our routine examinations but want further consultation and the development of leads from both the psychological and medical departments. We have already been assured of coöperation in post mortem studies by two institutions and hope for still others.

E. *Food Requirements and Basal Metabolism:*

Up to the present time relatively few data have been accumulated on the basal metabolism of children. Here a real contribution might be made in a relatively new field, and we might add something to the understanding of the changes which mental development brings about in the body. It is frequently stated that feebleminded children are subject to obesity, and for many years there has been a feeling on the part of superintendents of institutions of this kind that these children consume larger amounts of food than do normal children. Thus far no studies have been made to show whether or not these things are so, and if so, why. We have selected a group of forty of the heaviest eaters and are studying them.

In all of these fields, Dr. Jacques Loeb insists that we must reduce phenomena to mathematical laws.

The above is but a small part of the work suggested and as has been said we are keeping all of these suggestions before us even though we may attempt only a very little.

II. PSYCHOLOGY

In the realm of psychology we may draw upon the fields of experimental, behavioristic, comparative, clinical, genetic (child study), education (learning), and abnormal psychology. In the past years we have made a large number of studies of specific mental phenomena, and our files contain not only the reports of those studies but also the original records. As most of these have been published, it is not necessary to mention them here. Among the many suggestions for further work are:

A. *Long Time Studies:*

From a great many sources comes the suggestion for long time studies of groups of individuals. This was begun by Goddard and is now being followed up, bringing the material to date and including many more children in fields of inquiry that were at the time limited to but few, for the particular study under way. These studies must include not only a study of the ancestry and early history but also the medical survey of the individual, the anthropometric aspects, the psychology itself, the educational and industrial training, the ultimate social history, and the post mortem findings. We are now bringing up to date the various elements in the routine examinations. More than one-half of

our children have been checked up for this purpose. This will be continued from year to year and a study of these data will furnish the leads for studies in other fields as well as showing the classification groups of all of the children of the institution.

B. *Classification:*

The psychological authorities lay great emphasis upon the fundamental need in the whole research program for classification, in view of the probability of there being several varieties of feeblemindedness, *i.e.*, feeblemindednesses.

There is need of diagnosis and classification by types (verbal, manual, social, emotional, volitional), as opposed to intelligence levels merely, which have been carried on for a number of years. We hope that the work being done on juvenile delinquents at Jamesburg, N. J., will offer leads for us in this field. A large number of the children have been classified by the industrial and the social ratings scales and we are now completing the list. While the studies on juvenile delinquents will be of great assistance, this field is of such importance to a scientific understanding of the individual that we propose to continue the investigation of all of the above types.

C. *Learning:*

Many statements have been made concerning the learning of the feebleminded but practically nothing has been proved, especially in regard to two groups: (1) the potentially feebleminded who seem backward, yet mentally alert but unable to learn and progress, (a) the feebleminded with a degree of mental alertness exemplified in individual differences.

In many cases one of the earliest signs in the direction of the feebleminded is their inability to learn from ordinary methods of instruction. Some of the earliest investigations (*e.g.*, Terman, Ordahl, Jones) showed striking differences in the learning ability according to the field in which it was exercised. (Stupid children seem relatively superior in motor learning processes. Gifted children seem relatively superior in reasoning processes.)

Are there qualitative differences in the learning processes? In what fields do they learn most readily? Is it true that they learn to do but not to think? Can they be trained and not educated? Might it be said that mentally, they can be taught to walk on a given level (habit training), but that only the normals can be taught to climb? Can we, in short, determine their rates of learning, their methods of learning and their fields of learn-

ing? Where intelligence tests do not show a difference between the normal and the borderline cases, can learning be used for diagnostic purposes? These and many other questions show the need of intensive studies coördinated with studies in the realms of medicine and anthropology. The value of classification by learning instead of by intelligence carries us back to studies of idiots and of animals.

Arrangements have been made with the local school authorities to check up our work with normals. With the potentially feebleminded we hope to show the amount of progress possible, using the most up-to-date methods of instruction. Another group we are attempting to carry as far as possible in academic training to show the limit of their powers and whether intensified training will show an increase of the intelligence quotient. For these groups we have control groups of normals of (1) the same mental level and of (2) the same chronological age.

Achievement charts, with minute analysis of unit progress, are being put into use throughout the institution to discover the ability to learn concretely as opposed to the ability to learn abstractly. The status of all the children being known at the outset, we believe this will be possible through an analysis of the occupational life of the child.

D. *Emotions:*

Almost nothing is known about the affective life of the feebleminded except from observation. Most of such data are subjective; but little objective work has been done. Normal psychology of the emotions should be greatly assisted by affective studies of the feebleminded. There is apparently a difference between the institutional feebleminded and the noninstitutional cases, but no one knows what makes the difference. We should know the bearing of the emotions on social and antisocial types of feeblemindedness. May we not find the etiology of any instability? The psychograms of Doll and Porteus should give us leads in studying instability. It has been said that castration affects the emotional condition to a marked degree. Is this so? Clinical studies of the emotions are badly needed to compare with studies of the endocrines.

E. *Sensitivity:*

For many years there has been a theory that feeblemindedness is a general reduction of sensitivity (special senses). Are the feebleminded sensorially more or less acute than normals?

Are these compensations either mentally or through other senses? Is the trouble in the special sense organs, or in the sensory conduct nerves, or in the brain centers, or in the association fibers? Is this whole problem one for the psychologist or for the neurologist?

F. *Fatigue:*

Some years ago Goddard began some studies with the ergograph. These should be completed. Many observations have shown increased emotional disturbances as a result of physical fatigue and as a result of sustained responsibility. We all recognize the effects of the latter in a "nervous breakdown" in normal people. Is it fatigue of either of the above types that makes the difference between the social and the unsocial feebleminded? Greenman found that in certain types of fatigue the walls of certain brain cells become thinner. What is the clinical picture of these cases? Do the data on sleep offer any solution? What is the difference in the sleep of the feebleminded and of normals?

G. *Memory:*

The commonest statement made by parents who bring their child to us is that he can not be feebleminded because he has such a good memory. However, this seems to be a memory for isolated facts, but not a memory that can be used as a basis for judgment and reason. It is a sort of a mechanical, rote or encyclopedic memory. It has long been thought even by psychologists that the feebleminded have phenomenal memories and that this compensates in some measure for their lack of intelligence. But recently these assumptions have been questioned. This needs investigation. We recognize differences between visual, auditory, tactile and kinesthetic memory, and have some data on file. These studies should be carried much further.

H. *Instincts:*

Does mental life begin with a few instinctive reactions? If so, do the feebleminded start with this same equipment? Can we study instincts in quiescent stages, *e.g.*, with idiots, assuming that the idiot represents the arrested development of the normal baby? How does instinct, develop into habit? Are these early forms of human behavior perpetuated in the low-grade feebleminded?

I. *Association:*

The association process is basic to the learning powers, memory, judgment or reasoning, in normal psychology. Do the normal laws of association apply for the feebleminded? We have some data at hand and tests are available. There is much more work to be done in this field.

III. ANTHROPOLOGY AND SOCIAL SCIENCE

In the realm of anthropology (in which we are including certain branches of science perhaps not properly comprehended therein but which bear upon the study of the feebleminded from the standpoint of their social relations and physical type) we may draw upon the fields of anthropometry, ethnology, heredity and economics or sociology.

A. *Anthropometry:*

The studies already made suggest that the feebleminded as physical organisms show a general tendency toward underdevelopment. These studies should be elaborated and made more comprehensive in order to reach positive conclusions. Whether this tendency toward underdevelopment is an indication of general constitutional inferiority resembling infantile types of the civilized races or adult types of primitive races is a question.

B. *Heredity:*

The previous work in heredity should be extended. Families already studied should be brought up to date. Throughout the "Piney" districts of New Jersey, experiments in human inheritance are being continually made for us and this fertile field should not be allowed to go unstudied. New work might be done upon the assumption that feeblemindedness is not a unit character. This should be correlated with work bearing on the mechanisms of heredity. Confusion of hereditary feeblemindedness with nonhereditary (acquired) should be guarded against and eliminated.

C. *Enrivonment; Economics; Sociology:*

The never ending discussion of heredity versus environment may get at least a partial answer in this field. The place of social and economic status in the development of the feebleminded needs investigation. Why are some feebleminded industrially successful and others not? What causes criminality among the feebleminded? What are the facts about their sex behavior? We are

often told that they have more powerful sex emotions than normals have, yet many superintendents feel that they have less. Which is true? Why? What is the influence of selected environment on their final economic status?

CONCLUSION

We appreciate the practical inadequacy of the above program. Our intimate study of the research possibilities with the feebleminded reveals so many uncharted seas which the explorer must sail with but few landmarks and with all too imperfect instruments. One can but indicate the general directions from given points of departure; the courses must be mapped in progress. Moreover, to chart these courses is itself a research task of no mean scope, as we have laboriously found in endeavoring merely to prepare the ways for launching. To indicate the points of the compass has been our only present ambition.

INSTINCT AND DESIRE [1]

KNIGHT DUNLAP
THE JOHNS HOPKINS UNIVERSITY

HAVING precipitated, by a paper [2] read before this Association in 1919, a controversy over instincts which has flourished since that time, I may perhaps be pardoned for bringing before you what I hope will be my final controversial contribution to the subject.[3]

The discussion up to date has seemed to involve a large amount of confusion on the parts of some of the participants, and the several attackers of instinct have seemed to have as little common ground as have the several defenders. Yet there are practical results of the controversy which are unmistakable. In the first place, the old conception of instincts; mere teleological classifications of behavior ascribed to an indefinitely characterized inherited mechanism; has shown definite signs of giving up the ghost and disappearing from the field of psychology, although perhaps still strongly intrenched in educational psychology. Recently, I have found among biologists also a pleasing indication of a tendency to soften the old antithesis of instinct and habit; of inherited and acquired action-tendencies.

On the other hand, McDougall, who must necessarily be in the focus of our attention when we discuss instinct or instincts, has responded valiantly and admirably to the verbal missiles hurled at him, and has shown us that many of them were projected in error. He has, in short, cleared up his position, and made it plain that it is not that of the more naïve instinct doctrine against which my first attack was launched. I think it is plain, also, that such defense as may be made of "instincts" may be made solely in behalf of his conception, and that instinct-psychologists who are not willing to go the whole length with him have really little

[1] A paper read before the American Psychological Association, Washington, December 29, 1924.

[2] Are there any Instincts? THE JOURNAL OF ABNORMAL PSYCHOLOGY, 1919, vol. XIV, pp. 307–311.

[3] A more extended presentation of my views on the subject of "Instinct and Instincts" will be found in The Identity of Instinct and Habit, *Journal of Philosophy*, 1922, Vol. XIX, pp. 85–94, and The Foundations of Social Psychology, *Psychological Review*, 1923, Vol. XXX, pp. 81–102.

ground left to stand upon. When I use the term "instinct", therefore, in the following discussion, I mean the "instinct" as defined by McDougall.

It disturbs me somewhat, however, to find that McDougall, in a paper[4] read in this city just a year ago to-day finds me rather distinctly in agreement with him on the major points at issue. In effect, McDougall seems to charge me with having rejected "instincts" in name only, having really accepted them under the caption of "desires", although he finds my tentative list of nine desires is less adequate and more hastily put together than his famous instinct-list of thirteen *plus*. On this latter point, I quite admit the charge. My list of desires is merely tentative: some illustrations of what I am discussing, although illustrations drawn from those desires (or forms of desire if you will), which we can hardly avoid talking about. McDougall's instinct-list, on the other hand, is the result of longer study, and put out as far more final than provisional.

There seems to me, however, to be a fundamental difference between the desire and the instinct, which McDougall does not fully recognize. I still understand the instinct to be a *central* factor so far as its organic nature is concerned. That is, it could be referred physiologically only to certain dispositions of the nervous system, although not necessarily independent of factors of other origin, such as hormones. When he speaks of the instinct as a *disposition*, I am at present unable to understand him as meaning anything but a neural disposition.

What I mean by a desire, however, is not a "central" factor at all, but a strictly peripheral one. I mean something on the same plane as a "sensation" or "percept" (if one should use these terms), which is introspectively an object of experience, and physiologically a process or condition in some tissue *outside* of the nervous system, which stimulates or excites certain receptors. On the other hand, I do not find that McDougall considers an instinct as introspectively observable at all. If he does, then I must admit that I am dull, and have entirely mistaken his meaning.

As to the way in which "the language of the New Realism is strangely blended with that of introspection",[5] in one of my discussions, I do not believe this offers any difficulty to the psy-

[4] McDougall, W. Can Sociology and Social Psychology Dispense with Instincts? J. of Abnormal and Social Psychology, 1924, vol. xix, pp. 13–41.

[5] McDougall, op. cit., p. 23.

chologist. If I speak of a caterpillar crawling over an apple leaf, I may describe it in mechanochemical terms, using whatever symbols are fashionable in chemistry and physics at the moment, and relating it as a stimulus-pattern to the retinal receptors through the current conception of ether waves. But I may describe it also in terms of color, form and visible movement; describe it, therefore, as an actual object of my visible experience. This double description may mystify or confuse the behaviorist, but not the psychologist. Similarly I may describe the desire in the same mechanochemical terms and symbols (if I can) and consider it also as a stimulus pattern affecting receptors in the soma and viscera. And I may also describe it as an object of immediate experience. Now, I may be entirely wrong in my conception of what a desire really is, and I am not attempting at all in the present paper to defend my conception: I am merely trying to make it plain what my conception is, and it seems to me radically different from that of the instinct.

So far, I have been describing under the name "desire" something which may be classified as a "feeling" or "affective content", quite aside from any cognitive reference it may have, that is, quite aside from the *desired thing*. If we call this a *desire-feeling*, our further discussion may be clarified. I believe such desire-feelings may occur without distinct reference to any object: nevertheless, they usually *are* referred to objects, and this combination of desire-feeling *plus* reference to an object is also called a desire, and in fact, "desire" is used more often than not in this latter way. In attempting to classify desire-feelings under the tentative assumption that there are several, qualitatively different, it is at present impossible to proceed without referring them to typical objects, that is, without referring them teleologically. Because of this common ambiguity of the term desire, and my dislike of the hyphenate term (which is also ambiguous), I hesitatingly called the desire-feeling the "radical of desire".[6] This unfortunate terminology of mine apparently has confused McDougall, and helped to form his opinion that I meant by desire something like an instinct.

I may be in error in calling the instinct a force or energy. McDougall insists that it is a structural disposition: "a fact of mental structure".[7] But the instincts have "expressions" in

[6] Dunlap, K. The Foundations of Social Psychology, *Psychological Review*, 1923, Vol. xxx, p. 95.

[7] McDougall, op. cit., p. 27.

action, and in "emotional and conative experiences", and there are 13, *plus*, of them, apparently quite distinct from one another. And these expressions of instinct "cannot be explained by any mechanical theory".[8] I admit that I do not know what a "mental structure" is, aside from an actual pattern of conscious processes as they occur. But the instinct is not behavior as it occurs, nor is it consciousness as it occurs, nor is it content. It is apparently a determinant of all these. It seems to be something that might be called a potential energy. At any rate, it is far removed from the class of things to which belong the observable caterpillar crawling over the observable leaf, the stomach-ache, and the desire-feeling.

If I am reasonably correct in my interpretation of McDougall's instincts, they are really a group of our old friends the "faculties of the mind". Sill's line: "From this low world of ours no gods have taken flight," is distinctly true of those gods from the machine, the faculties. The simplest, and most widely used method of explanation of any mental function is to refer it to a faculty, just as the easiest way to explain a pestilence is to say that is the expression of the sun-god's wrath.

But like the other gods, the faculties appear at divers times under divers names and with divers symbols, and although their ancient appellation of "faculty" is taboo, their worship never wanes. None of them in the past have had the prestige and the glory enjoyed to-day by the faculty of "intelligence", whose sacred symbol is the I.Q.: And thirteen *plus* of them, the instincts, whose natures are revealed only in the behavior in which they manifest themselves,[9] are reverently accepted by large numbers of "social scientists, educationists, and psychiatrists",[10] as McDougall has himself pointed out. As for the psychologists, the popular suspicion that they are a scandalous crowd of atheists is apparently confirmed.

[8] Op. cit., p. 28.
[9] See McDougall, op. cit., p. 22.
[10] Op. cit., p. 40.

THE PSYCHOLOGY OF BELIEF

A Study of Its Emotional and Volitional Determinants

By FREDERICK HANSEN LUND

(Concluded)

III. The Determinants of Belief and the Ideal of Rationality

The significant correlation between belief and desire, and the comparatively low correlations between belief and objective measures, leave little doubt as to the moulding influence of emotional factors. But the determination of this important relation does not preclude the absence of other factors instrumental in moulding our belief-attitudes. Nor does it tell us anything about the antecedents of our desires, granting their priority to belief, for our desires as our beliefs do not exist in any *a priori* fashion, but are in most cases the result of conditioning forces continually at work in social and economic relations.

CONSTRUCTION OF A LIST OF BELIEF-DETERMINANTS

In the earlier writings on the subject of belief much interest is shown in its determinants, but in the survey made of these writings no work was found outside of Balfour's "Foundations of Belief" [17] which is definitely devoted to the problem. Even in Balfour's classic work no attempt is made to present anything like a list of determinants. It is acknowledged that any attempt to construct such a list, the present one included, must of necessity be wanting and incomplete, since the forces at work giving form to belief are innumerable. Consequently, such a list will at best amount to a classification of these forces.

Thirty-five subjects, students in a course in experimental psychology in Barnard, and who had all had a minimum of one year in psychology, were first asked to rate the propositions on the belief scale, the procedure being the same as in previous experiments. This rating being completed, they were presented with the following instructions in typewritten form:

"We may take as a primary assumption that beliefs all have their antecedents, and are directly determined either by certain

[17] Balfour, A. J. "Foundations of Belief." Longmans, Green & Co., London, 1895.

propensities inherent in the individual or by influences brought to bear upon him from without. With this in mind reconsider each proposition and along with its number state as briefly as possible—preferably in a word, phrase, or short sentence—what you think has been the main *determinant* for your rating of the proposition. The question is—what led you to rate it as you did? What (perhaps in your past experience) conditioned your rating? In some cases you may be able to think of no such condition or reason, in which event state that it is simply an opinion for which you can give no account."

Certain difficulties were naturally encountered in carrying out these instructions. (1) It is difficult in even the simplest case to say what has been the most important condition in our experience determining our belief. (2) Even though a condition is known it is not an easy matter to formulate it briefly. (3) In some instances one is aware of more than one such condition and it is hard to say which should be given first place.

The reliability of the results is influenced by these conditions and by the fact that the subject, instead of considering the actual facts of his experience, would be inclined to put down what he considers the most creditable and plausible determinants.

Nine hundred and sixty-four responses were secured. There should have been 1050 if each of the 35 subjects had given some determinant for each proposition, but in 86 cases no responses were given. This material being collected and arranged in manageable form it was presented to each of the subjects again with the instructions:

"Classify the conditions or determinants of belief submitted by the class in the previous experiment. First, classify them for each proposition, noting the frequency with which similar or identical conditions are given. Second, make a combined classification of the determinants given for all thirty propositions. Go over this list of determinants carefully and make sure that there is not too great overlapping. Reduce the list to the smallest number you find feasible."

It is to be expected that the resulting classification would show a good deal of variability. Yet the amount of agreement which did exist made it easy to consolidate the most consistent of the classifications into the list presented in Table III, which gives the distribution of the responses. The column under "individual response" comprises such responses as were not readily classifiable. The distribution of responses shown in the table is in no

wise a safe index to the relative significance of the determinants because it is based on too meagre data and on the students' judgments. It should be noted here that, in so far as the data presented in this section are based on the subjects' judgments, they are not considered of special value except as behavior itself under these conditions is of value. To interpret what a subject thinks or judges as a truthful account is subject to the criticisms advanced against introspective methods generally. But what a subject thinks or judges is of interest and importance to psychology, irrespective of its truthfulness.

TABLE III

Propositions	Teaching and Training	Personal Experience	Personal Opinion	Personal Reasoning	Desire and Satisfyingness	Authoritative Opinion	Public Opinion	Axiomatic Principle	Individual Response	No Response
1	22	..	..	..	..	..	7	..	4	2
2	17	9	..	..	..	..	2	..	5	2
3	8	11	..	2	2	..	..	..	12	..
4	15	..	..	1	..	11	..	..	4	4
5	8	..	8	..	4	..	5	..	7	3
6	8	..	11	8	..	..	..	..	5	3
7	18	..	..	2	..	2	1	..	4	8
8	8	..	4	4	2	6	9	..	..	2
9	1	10	8	1	3	..	4	..	4	4
10	16	..	..	3	..	7	5	..	..	4
11	..	24	3	2	..	..	..	..	3	3
12	11	1	8	6	2	..	1	..	3	3
13	2	17	3	..	..	..	..	6	7	..
14	12	1	3	7	6	..	..	..	4	2
15	8	..	6	8	7	..	..	..	5	1
16	15	3	7	6	..	..	1	..	1	2
17	19	2	4	..	..	5	..	..	3	2
18	10	1	4	2	12	..	..	..	4	2
19	14	2	3	8	..	..	..	..	4	4
20	10	..	..	2	..	2	1	14	4	2
21	14	3	2	2	3	..	1	..	4	6
22	13	..	8	2	..	2	..	..	5	5
23	24	..	..	2	..	4	1	4	..	..
24	12	2	6	7	..	..	..	..	6	2
25	2	19	4	1	..	..	..	4	2	3
26	14	5	1	3	..	3	4	..	2	3
27	..	20	7	..	..	..	..	..	3	5
28	2	7	5	2	9	..	..	..	8	2
29	2	4	6	11	2	..	2	..	4	4
30	12	1	5	..	2	4	..	..	8	3
Total	317	142	116	92	54	46	44	28	125	86

Table showing the distribution of the responses after being classified and consolidated.

For the main purpose which the list of determinants served in the experiment about to be described, any other list covering a somewhat plausible range might have been constructed and done equally well. The rather lengthy and laborious method was resorted to because it seemed more empirical and less individual.

THE IDEAL OF RATIONALITY

Sumner speaks of being "impressed with how small a fraction of our beliefs arise in the first instance through reason, or, having arisen, are maintained by it." Similar statements are frequent among the writings on the subject. But why should anyone be "impressed" with this fact if they were not expecting something else, and if the rational [18] as an ideal and as a potent factor in shaping our beliefs did not exist in their own minds as in the minds of people at large.

Though hardly any one would doubt the contention that the rational exists for most people as an ideal in determining belief and in conditioning motivation, it might be well to test it out under experimental conditions. If the contention is correct, then subjects who have been asked to arrange the list of determinants in their order of merit should place "axiomatic principle" and "personal reasoning" at the top, and "desire and satisfyingness" at the bottom, with the others taking intermediate positions according to the degree of rationality which they assume. This was indeed the case with the arrangements of the list made by two groups of Barnard students, members of classes in psychology. Each determinant was typewritten on a separate slip of paper so as to facilitate comparison and arrangement. The instructions were to "arrange the determinants of belief in their order of merit, placing at the top the one which you consider the most valid and acceptable, then the one which you believe should take second place, and so on down, with the one last which holds least dignity as a condition or determinant of belief."

The consolidated results of the two groups yielded the following arrangement for merit:

	A.D.
1. Personal Reasoning	.8
2. Axiomatic Principle	1.0
3. Personal Experience	.7
4. Authoritative Opinion	.6
5. Teaching and Training	.6
6. Public Opinion	.8
7. Desire and Satisfyingness	.4

[18] The term is used here as elsewhere in the discussion to refer to discursive reasoning and logical consistency.

The form in which the belief determinants were presented in this part, as well as in the later part of the experiment, was as follows:

A. PUBLIC OPINION
Beliefs fostered through a general attitude of acceptance by people at large.
B. PERSONAL REASONING
Acceptance determined by a rational process, a definite "thinking it out".
C. DESIRE AND SATISFYINGNESS
Beliefs embraced because they satisfy or embody conditions that are desired.
D. TEACHING AND TRAINING
Belief conditioned by instruction received at home, through the church, school, or similar institutions.
E. AXIOMATIC PRINCIPLE
Principles which cannot be doubted, being imperative in commanding belief.
F. PERSONAL OPINION
Beliefs for which no real account can be given except that one thinks it is so.
G. PERSONAL EXPERIENCE
Acceptance engendered through sensory experience or observation.
H. AUTHORITATIVE OPINION
Acceptance determined by the prestige given through official or authoritative attestation.

COMPARISON OF INDIVIDUALS' SELF-RATING WITH THEIR RATING OF OTHERS ON THE RATIONALITY SCALE

Since the arrangement of the determinants of belief in their order of merit and validity indicates that the determining factor in the arrangement is the degree of rationality assumed by each, such a list of determinants might well be considered as a rationality scale.

The list was presented to thirty Columbia sophomore boys in the random order in which it appears above, *after* they had rated the propositions on the belief scale. At the foot of the list the following statement and instructions appeared:

"The application of this list of determinants of belief to the individual propositions assumes that beliefs all have their antecedents, and are directly determined either by certain propensities inherent in the individual, or by influences brought to bear upon him from without.

"For each proposition select from the above list the determinant which you think has been most important in conditioning your belief and your rating of that proposition."

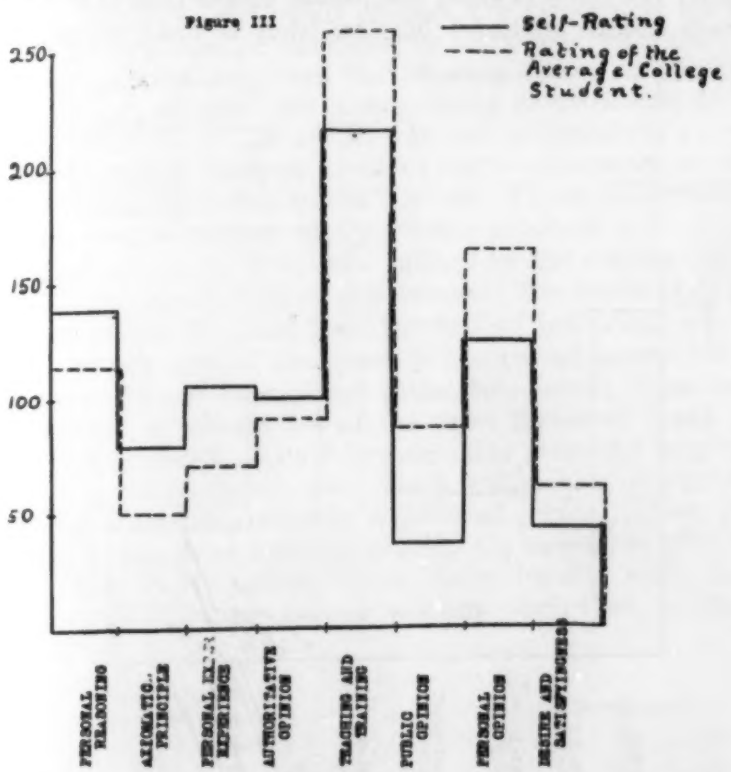
Two days later the propositions and the list of determinants were returned to the students, this time with the instructions:

"For each proposition select from the above list the determinant which you think is most important in conditioning the belief of "the average college student" in the case of that proposition."

This experiment was repeated with forty-six Nebraska sophomores and juniors, the procedure remaining the same.

The averages and S.D.'s of these ratings for both groups are given in Table VII (see Appendix).[19] The subjects indicated

Figure III



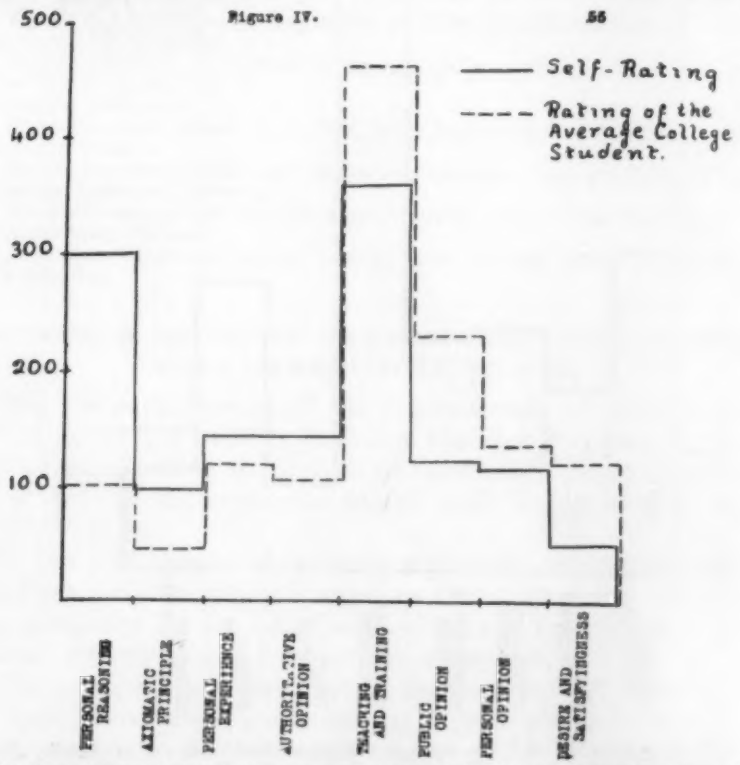
Self-rating and rating of "the average college student" on the rationality scale by 30 Columbia sophomore boys. The columns indicate the frequency with which a given determinant on the rationality scale (the determinants of belief arranged in order of merit) occurred under given conditions of rating. This figure, as well as the following, shows how much more frequent were the ratings on the upper half of the scale (the first four belief-determinants) when the subjects were rating themselves than when they were rating the typical student. On the lower half of the scale this condition is reversed.

their ratings by putting down the letter corresponding to the belief-determinant judged to be the conditioning factor in each case. In the recording and pooling of these ratings for the purpose of comparison, the letters were replaced by the number representing

[19] See note at end.

the belief-determinants' positions on the rationality scale, "B", or "personal reasoning", for example, in accordance with its rank would be recorded as one, "A", or "public opinion", as six.

The averages given in Table VII (see Appendix), show how consistently the subjects rated themselves higher than they rated the average college student. This tendency is most marked in the



Self-rating and rating of "the average college student" on the rationality scale by 46 Nebraska sophomores and juniors.

case of propositions 2, 5, 14, 15, 16, 18, 21, 24, 28, and 29. None of these propositions rank higher than 5.5 on the belief scale (see Figure 2), most of them clustering around the zero point. This position is taken by propositions whose ratings show a high degree of variability. In other words, they are propositions upon which opinions differ greatly, and, as may be expected, their content is of a problematic and theoretical nature. The inference is, that students think their own positions on questions of moment, or questions relating to controversial subjects, is determined by

more rational considerations than is the position taken by the *typical* student on these questions. They rate themselves high on matters of relative importance and low on matters less vital. They are more willing to allow that non-rational factors such as tradition, education, and public opinion, are responsible for their belief in the existence of molecules, or their belief that the earth travels around the sun, than that their position on the liquor question, tariff, or equal franchise, should be attributed to such sources. Thus, in so far as the rational is conceived as ideal, there is a marked tendency to place one's self nearer the ideal than the typical individual of one's group. Figure III and Figure IV give a graphic anaysis of the ratings obtained.

An analysis of the individual ratings on the rationality scale reveals pronounced individual differences. The tendency to place one's self nearer the ideal than the typical individual was true for only 86 per cent of the cases in the second group (46 subjects), while 14 per cent placed themselves lower. That it was true, however, of almost 5/6 of the cases leaves no doubt as to the general tendency. The following table gives the frequencies (reduced to percentages) with which individuals overrated or underrated themselves a given number of points. These points or scores were gained through totaling the individual's separate ratings—that is, his self-rating on the rationality scale and his rating of the average college student—and then noting the difference in the two totals.

Points Overrated (of possible 210)	Frequencies
60–70	1
50–60	3
40–50	10
30–40	10
20–30	9
10–20	31
0–10	22
Points Underrated (of possible 210)	
0–10	12
10–20	2

This naïve tendency to overrate one's self and to underestimate one's fellows is confirmed by the work of Knight and Franzen [20] when experimenting on a somewhat different problem.

[20] Knight, F. B., and Franzen, R. H. "Pitfalls in Rating Schemes", J. of Educ. Psychol., 1915, 16, 35-117.

One hundred and ten junior students were asked to rate in order of importance to themselves a list of interests varying in character from the essential to the trivial, such as, pleasing one's parents, dancing, the movies, development of character, the church, and health. There were 34 in all.

Two other ratings of these interests were made. In one of these the interests were arranged in "order of importance to the typical junior", and in the other in "order of importance to the ideal junior".

The correlation between the first named ratings (self-rating) and the second (rating of the typical junior) was .13; between the first and the third, .46; between the second and the third, —.64. Knight and Franzen conclude from the .13 correlation "that there is very little correlation between what the junior thinks he is and what others think he is"; from the .46 correlation that "there is a tendency for the student to think that he is as he should be"; from the —.64 correlation that "each believes he is the ideal of his group but does not extend the same courtesy to his fellows."

BELIEF-DETERMINANTS IN ADVERTISING

"The fact that the American people," to quote Poffenberger, "are each year induced to squander millions of dollars in worthless securities through the medium of advertising in some form, and that warnings seem quite ineffective in protecting them, makes one curious about the basis of belief in advertising. It is not enough to say that the American people like to be fooled and that there is no scheme too wild to arouse the confidence of a large proportion of them." [21]

Poffenberger agrees that belief is rarely the result of reasoning, and that logic when used comes in only to justify beliefs already established. In testing the relative weight of rational considerations in determining belief he gave fifty-seven students, graduate and undergraduate men, an advertisement of the New Gillette razor with the information and illustrations which the advertisement contained. They were asked to answer seven questions which were made out to test their belief in the new razor and their understanding of it. The answers showed that they were all agreed that the new razor was better than the old, and would in fact rather pay $5 for it than $1 to $2 for the old

[21] Op. cit., p. 1.

one. In supporting their belief they cited a statement from the advertisement about the "micrometric control of the blade position", but not one of them could explain how such control was gained, or how it was an advantage. Likewise, they believed the "channel guard" was an improvement, although they could not tell wherein the improvement consisted.

Poffenberger made another experiment which showed that the truth of the statements in an advertisement does not insure the public's belief in them. This is the case when the truth is too startling or surprising to be believed. A trunk advertisement showing a huge elephant standing on a trunk was presented to one hundred people with questions as in the former experiment. The picture was accompanied by signed statements as to the genuineness of the photograph, and as to the trunk being taken from regular stock. Thirty-eight per cent doubted the truth of the advertisement; 24 per cent questioned the genuineness of the photograph; and 21 per cent believed it impossible to construct a trunk which could withstand such weight. Experiments in which other advertisements of the same type were used confirmed the results of the trunk experiment.

"To create belief," Poffenberger concludes, "ideas aroused by an advertisement must not conflict too sharply with the reader's experience," and "must come from an authoritative source." He also contends that "we tend to believe what arouses our desires, our fears, and our emotions generally." [22]

IV. The Law of Primacy in Persuasion

Factors in persuasion

In textbooks dealing with composition, oratory, debate, and argumentation, ample attention is given to intellectualistic factors, such as clearness, logic, and understanding, all of which play a part in conviction and persuasion. Much less attention is given to the importance which attaches to habits of mind, habits of thinking, and common belief. Yet that these are significant factors in persuasion, and imperative in their demands upon the successful speaker, is apparent from data furnished on the subject, and should appear even from a superficial analysis of human motivation. To prove to an audience that the ideas advocated are in accordance with what they already believe is by no means unimportant in the art of persuasion. To have our ideas con-

[22] Op. cit., pp. 4–9.

firmed appeals to our ego, and our desire for consistency, while to have them attacked is likely to arouse a defiant and militant attitude, since our ideas and beliefs are in many instances so essential a part of our ego that they have become our most cherished possession.

That emotional factors, interests, prejudices, and desires, are elements in persuasion is also recognized by texts on the subject, but not proportionately to their value. The place assigned them should be determined by the results of empirical studies and by such correlations as have been obtained between belief and desire. To take special account of the self-interests of the individual, what is pleasing or displeasing or even what appeals to the vanity, ambitions, jealousies, and hatred of one's auditors or readers, may not seem commendable because of our social ideals and the atmosphere in which we are raised. However, their commendability is an ethical question, and in so far as such emotions and self-interests exist as important factors in persuasion, scientific interests must duly reckon with and account for them. An analysis of the most famous orations will reveal how very largely they depend for their persuasive appeal upon the primary emotions and "lower" impulses. These are usually camouflaged, however, or connected with "higher" motives which are more commendable. The rest is left to the rationalizing power of the individual. Frequently, skillful advertising will take account of the same principle.

Still another important factor in persuasion is the influence of order and arrangement in presentation. Should this follow the traditionally accepted notion of climax order, that is, from weaker to stronger? or should the order be reversed? Is there any significance to be attached to the order in which affirmative and negative arguments are presented? Who has the advantage—the one who presents his side of the question first, or the one who presents his last? The experiment described in the next section was made with a view to answer these questions, and as a further means to determine the influence of emotional factors upon belief.

ORDER AS A FACTOR IN PERSUASION

The question of order arose in the first place out of a consideration of the possible influence which discussions pro and con might have upon a group's rating of a given proposition. The study of the effects of such discussions, depending upon their length and the nature of their persuasive appeals, might be a

valid approach to securing definite estimations of the conditioning and determining factors in belief and persuasion. What, for example, would be the relative weight of discussions of the purely discursive type, as over against discussions relying mainly on their emotional appeals and question begging epithets? Important group differences depending on age, intelligence, and education, would doubtless become evident in such a study.

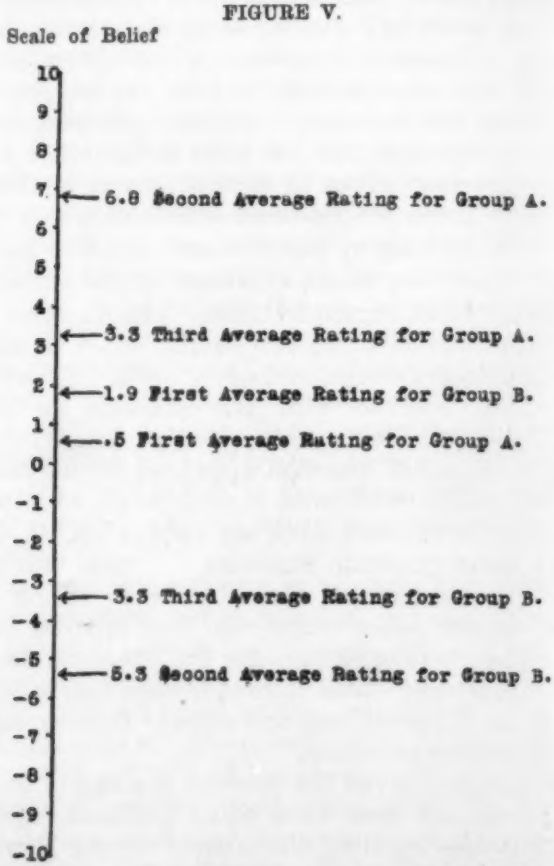
No attempt, however, was made to determine either group differences, or differences depending on the nature of the appeal. Discussions of the same length, and, as far as possible, of the same persuasive quality, were prepared pro and con on three propositions chosen from the list used in the other experiments. (These discussions are given in complete form in the appendix.) In the choice of these propositions attention was given to their serviceability in working up positive and negative discussions, as well as to the range they might represent in the amount of feeling already entertained in regard to them. The question on political rights seemed to be one which few people would be likely to have given much previous thought, and upon which they would be more or less passive. Not so with the question on monogamous marriage which was believed to be already strongly charged emotionally, while the tariff question appeared as one more likely to take an intermediate position in regard to its emotional content.

The subjects in the test were six groups (A, B, C, D, E, F) of Nebraska undergraduate students. There were twenty or more subjects in each group. For all groups a rating of the thirty propositions on the belief scale was first secured by the usual procedure. The average ratings for the propositions used in the part of the experiment which followed, were taken from this first rating of all the propositions, and appear in diagrams 5, 6, and 7, as "the first average rating."

Group A was first given the positive discussion on proposition thirteen, "Should all men have equal political rights?" They were then given the negative discussion. Group B was given the same discussions but in reversed order. When the subjects were presented with the first discussion they were not informed as to the nature of the test, nor were they aware that a second discussion was to follow. The discussions were in mimeographed form and were handed to the subjects face down. They were then instructed that they would be given ten minutes during which they were to absorb the material on the sheet before them. When the time was up they were requested to rate the proposition on the

belief scale. The material being collected, the same procedure was followed when they were given the opposed discussion. While these tests followed immediately upon each other, the first test, in which a rating of all the propositions had been called for, was given two days beforehand so as to eliminate any possible chance of the subjects remembering their first ratings.

FIGURE V.

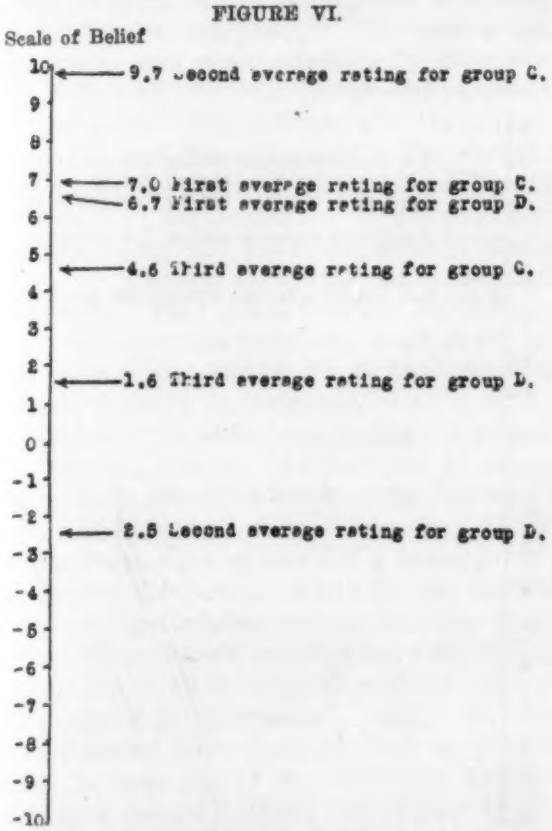


Average ratings of group A and group B for proposition thirteen, "Should all men have equal political rights?" Group A, positive discussion first; group B, negative discussion first.

Following the same procedure, groups C and D were given discussions on proposition twenty, "Is the protective tariff a wise policy for the United States?" Group C had the positive discussion first, group D the negative. Similarly, groups E and

F were given discussions on proposition fourteen, "Will monogamous marriage continue to be the only socially accepted relation between the sexes?" In the diagrams V, VI, VII, "the second average rating" is the rating made after the reading of

FIGURE VI.



Average ratings of group C and group D for proposition twenty, "Is the protective tariff a wise policy for the United States?" Group C, positive discussion first; group D, negative discussion first.

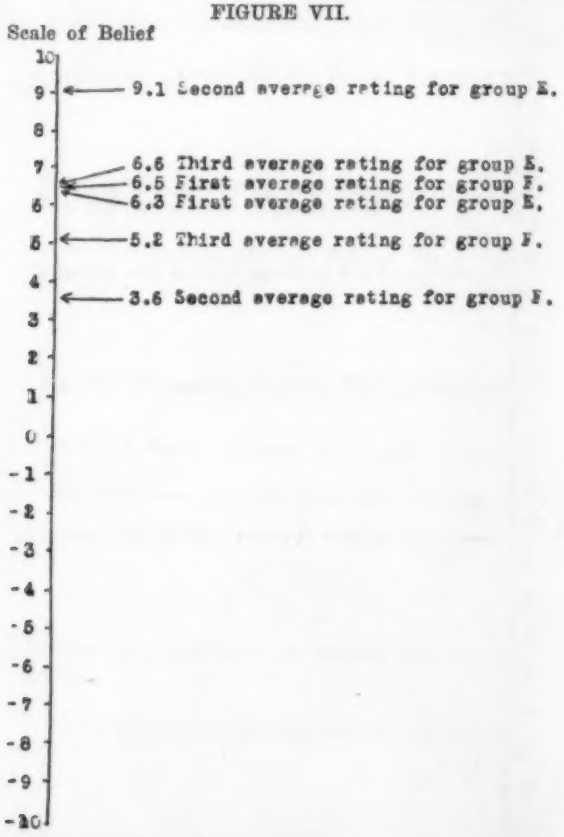
the first discussion; "the third average rating" is the rating made after the reading of the opposed discussion.

The analysis of the results presented in these diagrams reveals three outstanding facts of interest: (1) The marked deviation of the second rating from the first rating; (2) the disproportionate influence of the first discussion (second rating) in determining the subjects' final position; (3) the difference in

the extent to which the subjects were able to be swayed from their original position depending on the nature of the proposition.[23]

The controlled conditions under which the experiment was performed should leave no doubt as to what the results show or

FIGURE VII.



Average ratings of group E and group F for proposition fourteen, "Will monogamous marriage continue to be the only socially accepted relation between the sexes?" Group E, positive discussion first; group F, negative discussion first.

as to their reliability. The discussions certainly are fairly comparable both as to length and persuasive value. But even in the event of a slight difference in this respect, it could not lessen the

[23] There is no reason to think that this difference could be due to a difference in the groups themselves since these were as nearly comparable as any that could be secured for testing purposes under these conditions.

reliability of the results, since the groups working with the same proposition were presented with identically the same discussions, the order alone varying.

The significant thing about the results is not so much the extent to which belief may be conditioned by such influences as the discussions present, but the importance attaching to the *order* in which these influences are present. The consistency with which the first discussion was most effective in determining the final position of the subject, confirms the presuppositions of a *law of primacy in persuasion.* The difference in the extent to which the principle operated, and the difference in the extent to which the subjects could be swayed from their original position, is only added confirmation of the principle. For if primacy is the factor then propositions upon which one has already had ample opportunity to form an opinion should be much less subject to persuasive influences. This must indeed be the case with the proposition on monogamous marriage, much more so at least than with the one on political rights, where the effects of the law of primacy are particularly in evidence.

An examination of the individual ratings of group A and group B reveal the following facts: 48 per cent of the subjects rated the proposition the same after reading the opposed discussion as they had after reading the first discussion; 30 per cent were swayed not more than two points (of a possible 20 points) after reading the second discussion; while 22 per cent changed their ratings on the average thirteen points, ranging from 5 to 20 with an A.D. of 3.4. Thus there was a tendency for 4/5 of the subjects to adhere doggedly to their original position (the position taken after reading the first discussion), while the remaining ones practically all changed their position from positive to negative or vice versa as the case might be. That the final position taken by four out of five seemed entirely determined by the first discussion may be considered as giving still further emphasis to the suggestion that there is a law of primacy operating in persuasion.

But if such a law is present, how are we to account for it? For an answer to this question we must leave the experimental field and rely on what seems probable in the case. We have noticed that a possible origin of belief and its desirability to the individual is to be found in the contentment and the feeling of stability and adjustment which it yields. Such satisfyingness is nature's device in encouraging belief and a certain amount of unquestioning acceptance necessary to social uniformity and

organization. Man is continually therefore seeking points of attachment, and once they are gained he is loath to relinquish his hold. They have become intimate and necessary parts of his ego, and to have them assailed is equivalent to an attack upon his person.

Thus the first time a subject is presented to us we tend to form an opinion, and we do so in accordance with the influences present to shape it. Later such an opinion may gain a certain amount of emotional content if it is contradicted. This follows, not only because of its personal reference, but because we would not have our ideas appear fragile or inconsequential.

Another factor which may be responsible in a measure for the importance of primacy in persuasion is the *ideal of consistency*, an ideal closely related to the ideal of rationality because of its logical implications. We observe the ideal of consistency in the same way as we observe other ideals which have gained general commendation. We feel called upon to be consistent in the same way as we feel called upon to be rational. Once we have committed ourselves we frequently dare not change our positions lest we should be challenged with our former statements.

In accordance with this analysis, the students, having committed themselves after the reading of the first discussion, will remember this rating and will tend to be influenced by their desire to be consistent when asked to make another rating after reading the opposed discussion. But the consistency principle as determined by open commitment is not the only or perhaps even the primary factor as we have seen. A belief may gain a personal connotation though it has never been expressed. To have formed an opinion and inwardly to have yielded to its persuasive influence is sufficient to make it seem *ours* and something to which we owe our allegiance.

The significance which these facts give to primacy as an important constituent in belief and persuasion has certain practical bearings, some of which may be enumerated.

A. The speaker or writer engaged in a debate or dealing with a controversial subject, in observing the importance of primacy, should not follow the climax order in presenting his argument, but should weaken sympathy with his opponent *promptly* by attacking his strongest argument first, thus lessening the force of his adversary's case as quickly as possible.

B. In a debate, other things being equal, the affirmative, or whatever side of the question is first presented, should have the

advantage according to the influence of primacy. However, in staged debates the principle is likely to be much less influential because of the more objective attitude taken by the audience toward the issue itself.

C. The advertiser interested in presenting a series of advertisements, which differ in magnitude or attention value, should get the best results by observing the anticlimax order.

This point is, in fact, confirmed by the work of H. F. Adams who made an investigation as to the effect of climax, and anti-climax order, in advertising.[24]

D. Whether we are democrats or republicans, Protestants or Catholics, is frequently observed to be a consequence of paternal or ancestral affiliation. However, it is doubtful whether family ties or family considerations are nearly as important determinants as the fact that we *first* become familiar with the beliefs and the defenses of the beliefs of our family.

E. Our form of jury trial, just as our procedure in debates, assumes that both sides are given on equal opportunity. But the existence of such equality is based on logical considerations, and assumes that logical factors will control the decision of the judges or jurymen as the case might be. But our beliefs are rarely if ever fashioned through such dispassionate weighing of pros and cons. While the lawyer of the plaintiff is reviewing his case and making his appeal, the belief of the jurors is already in the process of formation, and they are not to be dissuaded from their position by an equal amount of evidence or persuasive appeal on the part of the defendant's lawyer, according to the law of primacy, which appears as an indubitable factor in persuasion.

V. Belief Defined in Its Relation to Knowledge and Opinion

In the preceding chapters data have been presented which should throw some light on the subject of belief-determinants and furnish a basis for more exact understanding of the relation which obtains between belief and the emotional and volitional constituents usually thought to exist as conditioning factors of our belief content. No attempt, however, has been made to define belief or the related concepts of knowledge and opinion frequently brought into discussions which aim to ascertain the nature of belief. Adequate definitions even under the most favorable

[24] Adams, H. F., "The Effects of Climax and Anti-Climax Order," J. of Applied Psychol., Dec., 1920.

conditions are not easy to formulate, and usually lead into theoretical difficulties. For this reason the problem of definition has been left for the concluding chapter, though logically it might have come first.

LEADING DEFINITIONS OF BELIEF

Alexander Bain finds the first germs of belief in primitive credulity. "As a specific experience belief arises when we suffer the shock of contradiction." There is, according to this author, "a primitive tendency to accept everything which has not yet been contradicted." "Belief is an innate credulity tempered by checks." [25]

James conceives of belief as a "feeling more allied to the emotions than anything else", and as a "state of consciousness '*sui generis*'." [26] In the latter he is supported by Baldwin who adds that belief is a "feeling of confirmation and security over and above the feeling of simple reality".

Stout calls it the "yes-no consciousness", and agrees with Sully that there are all degrees of belief and doubt. He uses the term belief as a convenient variant for judgment.[27]

Okabe, as we have noticed, concluded from his introspective studies that "belief and disbelief are consciousness of the same kind".[28]

"One can be truly said to believe," says Sumner, "only what one acts as if he believes, and the gauge of his convictions is in the extent to which it is embodied in his actions." [29] In this aspect of belief most authors are more or less agreed, though equal emphasis or importance is not given to it.

Hollingworth, from his experimental studies in judgment, concludes that belief may best be conceived as represented in varying degrees of confidence.[30]

This list of statements and definitions of belief are selected from leading writers and investigators in the field. They are in the main fairly well substantiated and some of them gain confirmation from the results of the present study.

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[25] Cited by Okabe, op. cit., p. 564.
[26] James, Wm., "Psychology," vol. II, ch. XXI.
[27] Stout, G. F., "Analytic Psychology," London; George Allan & Unwin, pp. 97–111.
[28] Op. cit., p. 596.
[29] Op. cit., p. 616.
[30] Hollingworth, H. L., "Experimental Studies in Judgment," Archives of Psychology, 1913, 29.

THE DISTINCTION BETWEEN KNOWLEDGE AND BELIEF

That knowledge and belief are unlike in their reference is not a matter for dispute, but there is reason to object when belief is made the logical opposite of knowledge. This is the case in many of the writings of earlier psychologists and their distinction is supported by popular as well as scientific opinion. Maher, in his "Psychology", indorses the notion of an absolute distinction between belief and knowledge, and gives full credence to the views of Hamilton whom he quotes to the effect that "knowledge and belief differ not only in degree but in kind. Knowledge is certainly founded on insight, belief is certainly founded on feeling. The one is perspicuous and objective, the other obscure and subjective." Maher further differentiates them by declaring that "knowledge is rational, belief irrational; knowledge refers to matters of fact, belief to matters of opinion." [31]

It should first of all be noticed, however, that opinion and not belief is logically contrasted with knowledge. In the second place, the average ratings on the belief scale, when arranged in order of highest rating, as shown in Figure I and Figure II reveal an evenly graded series allowing for no such definite classification of propositions as presumed by Maher and others.

From the graphs presented in Figure I and Figure II and from the data upon which they are based it would appear that knowledge and opinion are most applicable as designating extremes on the same scale. Belief is distributed throughout just as temperature on a scale the extremes of which are named hot and cold. Further evidence as to the nature of knowledge and opinion, conceived in the manner just stated, may be gained through the correlation obtained between the belief-ratings of group III (115 subjects) and the S.D.'s of the same ratings. The coefficient obtained was —.92. This high negative correlation would mean that the greater the degree of variability, the lower the degree of belief, or, the higher the rating of a proposition the higher the consensus of opinion in regard to it, and vice versa. Knowledge, therefore, may best be applied to statements upon which there is most general agreement, and opinion to those upon which there is least agreement.

The classification of the propositions discussed in Chapter II is of interest in this connection. Thirty-one junior students in

[31] Maher, M., "Psychology," Longmans, Green & Co., 1918 Ed., pp. 329–330.

Barnard were asked to indicate in the case of each of the thirty propositions whether they constituted matters of knowledge or matters of opinion. The results of this twofold classification are recorded in Table I which gives the frequency with which each proposition occurred under the two heads. Proposition one, for example, was by 17 considered a matter of knowledge and by 14 a matter of opinion. It is interesting to notice the lack of agreement among the judges, even upon propositions where agreement might have been expected. The experiment was not repeated because it depended on too rough and ready a method. However, the results obtained emphasize the lack of distinction between knowledge and opinion as well as a lack of understanding of the distinction.

This lack of agreement as to what constitutes knowledge, or matters of "fact", and what constitutes matters of opinion, is just as marked in the ranks of the scientifically trained. For these knowledge is sometimes made to refer mainly to the factual world, or the so-called "real" world, as distinguished from the world of imagination. But wherein does this "real" world exist? For some it is to be found in the world of sense perception. For others, who appreciate the nature of the purely sensory element, reality is to be found in what they call "primary qualities". Not a few notable thinkers have contended for an intangible yet abiding principle, such as Universal Reason, permeating the universe and forming the ultimate substratum of things. Another group have gone still further and declared that, since the world of sense is not "real", and since everything that is "given" must come through sense, including concepts of relation, reality is not only unknown but unknowable.

The inconsistency of these solutions give added support to the contention, drawn from some of the data here presented, that knowledge and opinion (or belief, so-called) are not clearly differentiable, and that our categories and absolutistic distinctions are idealized and artificial forms.

VI. Conclusions

I. Belief has a large emotional content. The correlation obtained between belief and desire was +.88. The correlation between belief and "knowledge" was +.64, between belief and "evidence", +.42, between "knowledge" and desire +.13, between "evidence" and desire, —.03. The much lower correlations

between belief and the more objective measures, support the inference to be made from the high belief-desire coefficients that, not only has belief a large emotional content, but emotional factors are significant determinants of belief.

II. There is a marked tendency to idealize the rational principle, and to conceive of it as the most valid and important of belief-determinants, notwithstanding the fact that non-rational factors appear to outweigh it so largely in conditioning our belief-attitudes. However, students, when rating themselves and others on a scale of rationality, do not consider rational factors nearly as important in conditioning the beliefs of their fellow-students as in the case of themselves. They tend to rate themselves nearer the ideal than the typical individual.

III. Beliefs, once formed, are not willingly relinquished, especially in the event of open commitment on a subject. Such unwillingness to give up one's original position, is definitely related, if not responsible for the fact, that the side of the question first presented to us, and the first influences brought to bear upon us, are most effective in determining our beliefs, so much so as to suggest the presence of a law of primacy in persuasion.

IV. Opinion and not belief is logically contrasted with knowledge. Knowledge and opinion are not distinct but refer to the extremes of a scale or a continuous series. Belief, as a certain mental content, is present throughout the scale of knowledge and opinion, just as temperature on a scale the extremes of which are hot and cold; it is not present with the same strength, however, but with varying admixtures of doubt.

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Note: An Appendix will appear in the more complete edition of this study which will be deposited in the Columbia University Library after July 1, 1925.

REVIEWS

THE CHILD: HIS NATURE AND HIS NEEDS. Ed. by M. V. O'Shea, Valparaiso, Ind. The Children's Foundation, 1924. Pp. 516.

A contribution of great value has been added recently to the literature on the nature and development of the child. The organization of the subject matter contained in "The Child: His Nature and His Needs" is particularly noteworthy. Each of the twenty-one chapters is concerned with an important problem of child life. Sixteen different authors have contributed material dealing with the subject or subjects on which each one is a recognized authority. These various contributions have been grouped together under three heads, each of which forms a separate part of the book: I, Present Status of Our Knowledge of Child Nature; II, Present Status of Our Knowledge of Child Well-Being; III. Present Status of Our Knowledge of Education. At the end of the book are to be found bibliographies, listed separately, for each chapter. In addition, the appendix contains a short biography of each of the sixteen authors. The index has been worked out in such detail that any subject mentioned in the book can be located readily.

This volume should be useful and valuable to any person who works with the child and who wishes to understand him. Several features of the book indicate its particular fitness as a reference book for classes in psychology, particularly in child psychology, or in teacher-training or parent-training courses. A glance at the subjects listed in the contents indicates the wide scope of the problems dealt with and the author's name connected with each subject indicates the reliability of the material included. For example, a discussion on the application of the principles of child development to school training is presented by B. T. Baldwin; W. A. White shows the need for nervous and mental hygiene among children; William Healy writes on the causes of delinquency and methods of dealing with it from both the corrective and the preventive standpoints; there is a chapter on intellectually inferior children by A. Gesell and one on intellectually superior children by L. S. Hollingworth; J. J. Tigert's treatment of the causes of the gap between our knowedge of education and our educational practice is followed by several chapters by M. V. O'Shea which show how changing objectives in our American schools together with changes in the course of study and in methods of teaching and management, and extension of educational facilities, opportunities, and requirements are bridging this gap between knowledge of education and practice of teaching. The minute index referred to above, is another point in favor of using this book for reference work. Several good tables and charts and many unusually clear photographs are included. One might wish that the editor had given lists of tables, charts and photographs but this has not been done.

JULIA A. KIRKWOOD.

THE NORMAL MIND. An Introduction to Mental Hygiene and the Hygiene of School Instruction. By William H. Burnham, Professor of Pedagogy and School Hygiene in Clark University. D. Appleton and Company, 1924. Pp. xx + 702.

The sound mind in a sound body has been the aim of the hygienist. In the field of mental hygiene the difficulty has been to discover an adequate definition of the sound mind and a reliable technique for its diagnosis. The emphasis has been placed on the ability of the individual to adjust himself to his environment; inability to adjust was evidence which the mental hygienist used in his educational program and the psychiatrist presented in his case histories. This lack of adjustment was stated in *social* terms. The implication has been that the socially adjusted individual—the one whom the hygienist and psychiatrist call "normal"—is the individual whose conduct conforms to group standards.

The problem which results may be stated as follows: to what extent may nonconformity to group standards be regarded as symptomatic of maladjustment? A possible answer is that the criteria of hygienic adjustment may be the awareness possessed by the individual as to what the standards of the group actually are, and the degree of *insight* possessed by him as to just how far his behavior has departed from these standards. In other words, he must not lose touch with the realities of group behavior. This factor of insight, however, is frequently minimized or ignored in statements of mental hygiene doctrine. Conformity as a criterion of healthful adjustment finds expression in the emphasis placed on the individual's ability to get on successfully with his fellows, and the ideal to be attained is that of the contented man happily adjusting himself to the demands of his social environment.

The individual who notes flaws in the social structure is not apt to be contented. If he makes his observations too insistently vocal he runs the risk of being called "anti-social" or "unadjusted" by the hygienist. I may be, for instance, a member of some group—a college faculty perhaps—and be unwilling to subscribe to certain current policies. If I am insistent in my opposition, and if my opposition represents only a very small minority of the group, it is difficult to see how my conduct can conform to some of the current doctrines in mental hygiene. Assuming that my objections to current policy have some basis in sound logic, the very real problem confronts me of keeping my conduct within hygienic bounds. There are several courses open to me: I may be able to keep my opposition at a purely intellectual level freed from all emotional accompaniments, or I may conform as to externals, confining my opposition to tentative suggestions.

In the field of psychiatry an especially high value is placed upon the presence or absence of social adjustment. The most important feature of the case history is the story of the patient's attempts at adaptation. It is interesting to note that the test of the adequacy of those attempts rests with the group, not with the expert in mental and nervous diseases. That

is, it is the group which determines whether its standard of social efficiency has been met; the group in reality is evaluating the evidence on which the psychiatrist's diagnosis must rest. The inadequacy of the psychiatrist in this regard is probably due to a lack of certain knowledge of the integration of the normal mind. If he has behavioristic prepossessions, he is forced to await evidence in the form of gross malbehavior.

In a word, there seems to be a tendency to limit the statement of the problems of mental hygiene to terms of social efficiency and contentment, and the criticism is offered here that harmonious coöperation with the social group does not *necessarily* indicate the highest level of hygienic attainment.

In Professor Burnham's book we find both aspects of the problem presented. Social integration is made the test of the normal mind. Specifically it is the ability "to get on peaceably in the social group of which one is a member" (p. 55) which is the practical test of normality. Opposing this we have the stressing of the importance of a socially significant task and freedom with which to pursue it.

The core around which Professor Burnham constructs his thesis is the importance of an integrated personality, which he defines as a unified personality harmoniously working towards an end. The most important psychological tool in this integration is the attention; its neurological correlate is found in the integrative action of the nervous system. In the disintegrated mind we find the clinical pictures of mental disorder. It is the aim of education to bring about integration with the result that the child may be rightly adjusted to his environment. To bring about this integration, opportunity must be offered to the child for coördinated activity. This is the second important thesis of the book. The essentials of human happiness for Burnham are to be found in this coördinated activity. He says: "The essentials, without which a person cannot be quite sound mentally and with which apart from accident, infection, or heredity, one can have no serious mental disorder, the absolutely essential conditions are three: a task, a plan, and freedom." (Pp. 207–8.)

The general criticisms which have been expressed in the first paragraphs, while in the direction of the general implications of mental hygiene, apply in some measure to Professor Burnham's book. The emphasis on the doing of a significant task raises the question whether this may not be in conflict with the effort to engage in coöperative activity. The following quotation (p. 55) illustrates the double emphasis: "Thus, from the practical point of view, the normal mind has such a degree of integration that it can adjust to the ordinary situations of life, perform some significant task in society, and get on peaceably in the social groups of which one is a member."

Although in the integrated personality working at a socially significant task, we have the essentials of Professor Burnham's point of view, it must not be thought that the book is limited to this. A review of the twenty-one chapters which the book contains, reveals a vast amount of material. Chapter one contains an introductory discussion of the aims and place

of mental hygiene in education. Chapter two defines the normal mind in functional terms, emphasizing its compensatory activity. The integrative aspect is stressed and the essential psychological mechanisms by which this is brought about are attention and orderly association. In chapters three, four, and five we have an analytical discussion of the conditioned reflex. Association is regarded as the chief mechanism in making integration possible, and hence the conditioned reflex is given attention as the "simplest form of association—the association of stimuli". The work of Pavlov is reviewed in connection with animals. The studies of Lashley, Krasnorgorski, Watson, and Mateer are presented as examples of the establishment of the conditioned reflex in children. It is possible that the author leans rather heavily on the conditioned reflex as an explanatory principle, and one cannot help be reminded of Jastrow's reference to the "hemorrhage of ink"[1] which followed Pavlov's operation. The treatment of habit in chapter seven points out the possibility of forming habits either by repetition or shock. Habits are regarded as being merely systems of conditioned reflexes.

To the reviewer the most significant and stimulating chapters in the book were eight and nine. In these chapters the author presents his concept of the task (coördinated, purposeful activity) in the school and in the social group. For Burnham the core of mental hygiene and education is found here. The importance of discovering the task suitable to the intellectual attainment of the individual, the tragedy of the loss of a task, the importance to industry of making the task, however small it may be, socially significant and worthwhile and the problem of integrating tasks in the work of the world are the significant points discussed in these chapters.

The disintegrating forces; the fears, bad mental attitudes, inhibitions, etc., are discussed in chapters ten, eleven, twelve, thirteen, fourteen, and fifteen. Orderly association and its interference is discussed in chapter sixteen.

Chapter eighteen is devoted to the subject of "Pseudo-feebleminded-ness". This condition is defined in the following terms: "Almost everywhere in nature we find counterfeit organisms and counterfeit forms of behavior. . . . In like manner we may use the general term pseudo-feeblemindedness, for a number of arrests, inhibitions, defects, and disorders that in some respects resemble feeblemindedness. As a matter of fact, we meet them everywhere in society and in the schools. . . . Tested by the ordinary methods, these children do not appear normal. Something is wrong" (pp. 569–70). While there is probably no doubt as to the existence of such a group, one feels that the author has overemphasized their frequency.

Chapter nineteen contains an interesting presentation of the task in pathological cases, the only place in the book where mental disorders are

[1] Psychol. Review, 1924, 31:205.

formally discussed. The same conditions and mechanisms are found as in the case of the normal mind. The following is a significant quotation: "In these conditions of mental disorder we find the same conditions necessary for the development of conditioned reflexes and conditioned inhibitions, and the same sovereign method for developing integration of the personality or checking the mental disintegration, in the doing of worthwhile tasks with a maximum of freedom in the choice and the doing" (p. 600). This chapter also contains a significant discussion, refreshingly favorable in a psychologist, of psychoanalysis. The author sees in psychoanalysis a method of removing unfortunate inhibitions. In the process of psychoanalysis the patient finds himself confronted with a needed task. Without entering into a technical discussion of the limitations and extravagances of the psychoanalytic doctrine, Professor Burnham gives an interesting summary of the reasons why it "works". The following statement as to what the psychoanalyst does, is simple and direct and does not seem to contain anything insidiously immoral! "Briefly, what the psychoanalyst does is to find if possible the source in the individual's mental experience of the disagreeable or disgusting memory and attitude, then to bring it clearly to consciousness, lower the threshold so that one will think of it without repression, then associate a rival stimulus with the disagreeable memory, a rival stimulus of agreeable, or humorous, or idealistic character, which will serve to inhibit the disagreeable idea or attitude itself" (p. 635).

The two final chapters are devoted to a statement of the principles of mental hygiene and a summary and conclusion.

In the reviewer's opinion, Professor Burnham's book is of fundamental significance to mental hygiene and pedagogy. It is written in nontechnical language and should be useful to both teachers and parents. Its usefulness is augmented by lists of references and topics and questions for discussion at the end of each chapter. It is perhaps an unimportant criticism that the book might have been reduced from seven hundred to five hundred pages without loss of essential material.

In the opinion of the reviewer a complete account of the normal mind, mental hygiene and the hygiene of school instruction, should contain some discussion of the part which sex plays in psychobiological adaptation. It would seem that no single factor is more important in the integration or disintegration of the personality than that group of responses which are termed sexual.

It is interesting and significant that Professor Burnham is able to write a seven-hundred-page book on mental hygiene without resorting to instinct or instinctive behavior as an explanatory principle.

The strictures which have been suggested against current mental hygiene doctrines represent, in the reviewer's mind, problems for solution rather than unsurmountable difficulties in the way of an adequate mental hygiene. It would seem that there is an essential contradiction between the two parts of Professor Burnham's program, the task and freedom on

the one hand, and the necessity of group coöperation on the other. Professor Burnham has not given an undue emphasis to the latter aspect and has placed significant emphasis on the former. It may be that the restraining influence of the group over the tasks of the few is essential, but the wholesale adoption of this attitude by the uncritical and undiscriminating hygienists is unwarranted in the present state of our knowledge.

FRANKLIN SMITH FEARING.

Stanford University.

SIGMUND FREUD: HIS PERSONALITY, HIS TEACHING, AND HIS SCHOOL. By Fritz Wittels. New York: Dodd, Mead and Company, 1924. Pp. 287. Price, $3.50.

This is a disappointing book. There are many of us who, whatever our psychological affiliations, recognize the fact of Sigmund Freud's genius, and who might be tempted to buy a book with this title in order to obtain a closer look at the man himself. Wittels' book will not give it to them. It is uninspired.

The footnote on page 15 gives the clue to the greater part of the volume. "Most of the biographical details in the text", says Wittels, "are taken from Freud's 'Die Traumdeutung'." Why then reprint them, and with so little sense of humor as in the note which refers us to page 162 of the same work "for an instance of strict devotion to duty"! These two chapters, entitled "Early Years" and "Charcot", smack of a second rate doctor's thesis, but it is only fair to say that they form a small and unimportant part of the volume.

The next few chapters give a fairly orthodox account of the earlier phases of the Freudian Psychology. Dream Interpretation, Repression and Transference, Slips, Mistakes and Blunders, are followed by Eros, which is an account of Freud's theory of infantile sexuality. Then comes a chapter on "Freud's Personal Characteristics", containing some interesting details of the meetings of the Viennese group. Here for a moment we are permitted to look into Freud's waiting room and watch the Apostles at their black coffee and cigars, while the Master lays down the law. "The evenings were sometimes rather dull." Terrible admission, but one may suppose the same is true of the early councils of most Movements, from the Christian church down, as seen through the eyes of minor participators.

The two or three pages of Wittels' book giving these details are the only ones that furnish any first hand picture of the subject of the biography. The rest is taken up with a history of doctrine and of quarrel. There is first the Adler development quarrel and secession, which is followed by an account of the "Castration Complex" idea, and then by the Jung quarrel and secession. Finally there is the case of Stekel, man of intuition, brilliant practitioner, who, from the evidence of this book and the reviews of his work by the more orthodox, is regarded with a peculiar detestation in the ranks of the faithful. It is interesting to see how much better a picture we are given of Stekel than of Freud, the man of *flair* as contrasted

with the man of genius. The contrast brings out, indeed, the chief criticism this review has to make. One feels that one understands Stekel. He walks out of the pages a living man. One does not understand Freud, which, considering the title of the book, is a fatal defect. We are shown a *nexus* of spiteful politics, converging on a figure in the center. We are not shown the figure in the center. The reader of Freud's works knows that here is a genius. He knows it better when he reads Freud's works than when he reads this book. Boswell is not yet come. One cannot refrain from quoting Freud's own opinion in a letter which Wittels reprints in part: "You know", says he, "too little of the object of Study". *Ipse dixit.*

GEORGE HUMPHREY.

ADOLESCENT INTERESTS: A Study of the Sexual Interests and Knowledge of Young Women. (*Arch. of Psychol.*, No. 66). By F. I. Davenport. New York, 1923. Pp. 62.

This monograph is a behavioristic study of 880 written questions on sex matters from a group of 160 women students, prior to a course in sex hygiene which the students themselves had requested. These young women were enrolled in a city training school for teachers, and ranged in age from 17 years, 9 months, to 23 years, 8 months, with an average age of 19 years, 10 months. The results of a careful study and classification of the questions are quite contrary to the generally accepted views on the sexual interests of adolescent women.

Out of the 880 questions, 164 were concerned with menstruation, 77 had to do with venereal diseases, and 42 with the reproductive organs of women. The author claims that these three classes of questions are hygienic and nonsexual in nature; and they undoubtedly display an extreme ignorance of the physiology of sex. In another group may be placed 98 questions on childbearing, 54 on reproductive and embryological processes, and 56 on anomalous congenital conditions and heredity. The 98 questions on childbearing were for the most part negative in character, since inquiries in regard to contraceptive measures and the conditions of barrenness predominated. Only two out of 98 questions were concerned with the care of the body as a prerequisite for the production of well endowed children. Although the author does not discuss the matter, her data afford further evidence against the alleged maternal instinct. The studies which have been made of unmarried mothers also illustrate the fact that the "maternal instinct" functions quite differently under different circumstances.

Dr. Davenport classifies other questions in the sexuality group. Of the 101 which had to do with sexual intercourse, over half showed some perturbation in regard to the extramarital relations of men. Fifty-five questions were asked about sexual feelings and attractions, and three-fourths of these were concerned with sex in its crude form. "There was no instance of a question which explicitly asked for information in regard to the regulation of sexual feelings in the interest of physical health."

Fifty-six questions showed curiosity about boys and men. These questions were mainly directed towards getting information on certain physiological matters, and showed little interest in the hygiene of sex development and sex differences in mental characteristics. One young lady asked "whether any man is good enough for a girl to go with". The interest shown by the above questions does not measure up to the unselfish irradiations of the finer sentiments which have been so dramatically celebrated by the novelists. Most of the 50 questions on marriage had to do with venereal disease and the marriage of relatives. "There was no instance of a question which asked for information in regard to physical traits and marital happiness, and no instance of an inquiry concerning marital obligatons and opportunities." Out of a total of 880 questions, only two had to do with the regulation of conduct for future parenthood!

Although the above figures have only a very general value, and the prospective teachers may not have been representative subjects, the study emphasizes the need for a more wholesome education of women in matters relating to sex. If men were brought up under the same unfavorable conditions, it is probable that they would be equally prudish and ignorant. In any event, little benefit will be derived from considering that as an "instinct" sex will develop and function properly of its own accord. The present study emphasizes the well-known fact that sexual interests can be radically altered by training.

HULSEY CASON.

THE INFLUENCE OF TOBACCO SMOKING ON MENTAL AND MOTOR EFFICIENCY. An Experimental Investigation. (*Psychol. Monog.*, No. 150). By Clark L. Hull, Associate Professor of Psychology, University of Wisconsin. Princeton, 1924. Pp. 161.

The purpose of this investigation is summarized as follows: "to determine quantitatively the effect upon the efficiency of a dozen typical mental and neuromuscular functions of [19] young men, of smoking a large pipe of mild tobacco for a period of 25 minutes, the smoking to take place one and one-half hours after a meal, the smoke to be blown from the mouth at once and not inhaled, and the effects to be traced for a maximum of one hour and 45 minutes after the smoking ceased" (p. 19). The control dose was given by means of an experimental pipe, which helped to duplicate the sensory experiences in smoking. An ingenious use of normal suggestion served as a strong reinforcing factor, and the subjects did not know when they were smoking tobacco.

The author tested the effect of smoking on the following functions: neuromuscular processes (pulse rate, tremor of hand, tapping, muscular fatigue), sensorimotor processes (speed and accuracy on A-test, reading reaction-time, learning reaction-time), and higher mental processes (speed and accuracy of adding, memory span, rote learning). It was found that smoking caused a marked and uniform stimulation of the heart rate, and a large and uniform increase in the tremor of the hand. The effect on

the speed of tapping was negligible, and the effect on muscular fatigue (from tapping) was uncertain. No measurable effect could be observed on the speed and accuracy of cancellation, and there was only a very slight increase in the speed of oral reading of isolated words and in the speed of oral reaction to freshly learned material. In speed of adding, smoking caused a consistent loss of efficiency for nonsmokers, but a regular gain for habitual smokers. There was no measurable effect on the accuracy of adding. A decrease in memory span occurred after smoking, and there was also some evidence for a loss in the efficiency of rote learning immediately after smoking.

Like practically all of the psychological experiments on drugs, the conclusions which may be drawn from this study are somewhat limited in scope. Tests were made only for the immediate effects of tobacco, and the study gives no indication concerning the effect of smoking a pipe for a number of years. But Dr. Hull has made a valuable contribution especially in the method of giving the control dose, and he has observed some very definite effects of smoking on pulse rate, tremor of the hand, and speed of adding. These results appear more significant when we recall that the smoke from the pipe was not inhaled. The experimental report is written in a clear style, and the general arrangement and statistical treatment of the results leave very little to be desired.

HULSEY CASON.

PRIMITIVE RELIGION. By Robert H. Lowie. New York: Boni and Liveright, September, 1924.

In this volume Dr. Lowie attempts to provide "an introduction to further study in which other than traditional topics shall assume a place of honor". And traditionally religious phenomena have for the most part been considered historically. Origins of religious experiences have been sought when even the subject matter of religion has remained indefinite. And so Dr. Lowie, before proceeding with special problems, seeks to define the origin and nature of the religious experience. This approach is possible only if the psychological aspects of primitive religions are emphasized. To illustrate the need for psychological analyses as well as historical considerations, Dr. Lowie presents in the first part of his work sketches of four primitive religions.

The essence of the American Crow Indian religion is found in the "visionary" experience. To become great, to attain success in any adventure one must gain the blessing of some supernatural power. The would-be visionary, isolated, naked, without food or drink, invokes the spirits for four days, awaiting his "vision".

In order to understand the religious experience of the West African Ekoi it is essential to appreciate the hysterical fear of evil magic. The Ekoi religion centers in their conceptions of ghosts and the accompanying ritual practiced to ward off their anger.

Sorcery does not play so important a part among the Bukaua of New

Guinea. Here witchcraft is only one special manifestation of a more general system of ideas, the faith in magic. Accompanying this magic which is employed on almost every occasion is the belief in the efficacy of certain institutionalized modes of conduct and a dependence on the potency of mystical formulae.

The spirit of the Polynesian religion is characterized by the intricate series of socio religious taboos.

A comparison of these four groups will illustrate the point that these religious phenomena are not so much set off from one another by specifically unique traits as by the organization of the same traits into distinctive complexes. All of the groups recognize the "Supernatural". All believe in ghosts, witchcraft, in magical formulae, in mysterious powers resident in objects, all have ceremonies and observe rituals. But these cultural phenomena which center about and are connected with the Awe-inspiring, the Weird, the Extraordinary, are infinitely ramified. The common elements are differently weighted. In times of crises a Crow fasts for a "vision", an Ekoi consults a diviner, and prays to a ghost, a Bukaua resorts to a magician, and a Polynesian sets up taboos. The need for an appreciative psychological approach to religious expressions becomes patently obvious.

In the second part of this volume Dr. Lowie attempts to evaluate the chief theories held in comparative religion. Tylor's animistic scheme, Frazer's distinctions between religion and magic, and Durkheim's collectivism are criticized from the point of view of modern ethnology. Drs. Marett and Goldenweiser and Schleiter have covered most of this ground. Dr. Lowie commends Tylor for his psychological interpretations of religious development. The immediate sensory observations of dreams and visionary experiences affords a plausible source for the origin of the spirit concept. But Tylor is at fault "in so far as he limits the consideration of religion almost wholly to the belief in spiritual beings, that is, to the conceptual aspect of religion without due regard to its emotional concomitants" (p. 108-109). Here again Dr. Lowie stresses the need for recovering the psychological correlates of the religious belief no matter what its origin be. Durkheim and Frazer both err in their interpretations because of false intellectualistic psychologizing. Primitive man does not set over the supernatural from the natural. Hence, the invalidity of separating the magical from the religious realm. Furthermore, insists Dr. Lowie, the magical and the religious experience partake of the same psychological character. Lang and Schmitt are credited with having established historically that monistic conceptions of supernatural beings are false. Any evolutionary series would be arbitrarily set up.

Though the least organized, part three is the most stimulating section of the volume. Dr. Lowie deals with the relations between anthropology and psychology. The Ghost Dance of the Plains Indians and the development of the Peyote Cult serve as examples of the need for knowing the antecedent and accompanying conditions before a fruitful psychological

analysis of a group's religion can be made. On the other hand, without a knowledge of the psychological elements of the religious experience any history of religion is not only false but becomes unintelligible. Several chapters are devoted to stating some of the problems which must be investigated before the pithy generalizations we seek can be made. The rôle of women in the religious experience is entirely unknown. To what extent are her disabilities innate or due to the specific cultural setting? How do women's subjective reactions differ from men's, if they do?

The relation of the individual to society must be further investigated. By comparing the behavior of a number of individuals exposed to the same cultural environment differences in their responses will signify individual idiosyncrasies. How varying degrees of suggestibility, "sensory types," the kind of imagery, and the "I.Q.'s" of individuals affect religious growths present another set of problems.

The reciprocal influences of art upon religion and religion upon art constitute a further set of investigations.

Whether or not esthetic elements enter into religious ceremonials and to what degree are factors which are yet unknown. The significance of rationalization (certainly one positive contribution of the psychoanalysts), finding "good" reasons for the observance of religious activities must remain central in any investigation of group religious activity.

The volume, writes Dr. Lowie, is dedicated to the "discussion of those cultural phenomena of the simpler societies which center about or are somehow connected with the sense of mystery or weirdness". Dr. Lowie on the basis of empirical findings extracts religious phenomena that from a psychological point of view belong together. It becomes clear that the most divergent objects can become invested with religious value. This religious sentiment may be concentrated on any object and thereby create its "Supernatural". Dr. Lowie misses the point of all his writing. He succeeds admirably in describing several mechanisms by which religious experiences are determined. He demonstrates convincingly the importance of knowing the historical antecedents of religious developments before attempting psychological interpretations. The need of appreciating the complexity of psychological origins and the different organizations in which common traits may be woven is emphasized again and again. We are, nevertheless, no nearer in understanding the actual "religious thrill". In 1915 Dr. Goldenweiser in an article in the *Journal of Philosophy* (vol. XII, p. 632) which, curiously enough, is not mentioned in the formidable bibliography of Dr. Lowie—presents in a most lucid manner the thesis of Dr. Lowie's book. But Dr. Lowie *has* succeeded in focussing attention on problems which have heretofore remained unknown or unnoticed. He has set up a general psychological pattern within which limits the origin and nature of religious experiences may be sought. His insistence that the only approach to the problems of primitive and comparative religion

is through the psychological interpretations of the empirical findings of specific areas is in keeping with the methods of the critical school of American Ethnologists.

NATHANIEL CANTOR.

Columbia University.

ABNORMAL PSYCHOLOGY AND EDUCATION. By Frank Watts, M.A., Late Lecturer in Psychology, University of Manchester. New York. D. Appleton and Co., 1924. Pp. xxi+220. Price, $2.00.

This volume is number seven in the Conduct of Mind Series, and it has an editorial introduction by Joseph Jastrow. It is written primarily for educators, but the student of psychology will also find in it much that is interesting and suggestive. The book has four chief divisions which will indicate the nature of its contents: "The Scope of Abnormal Psychology; The Crowd at School: Its Control and Education; Psychopathology and the Development of Personality; and The Psychology of the Defective Mind: Its Influence upon Teaching Methods."

In the first part there is a brief historical sketch of the changing attitude towards the insane and the abnormal. This is followed by a discussion of the nature of the abnormal and the scope of abnormal psychology. The latter is defined as "The science which deals with those marked aberrations of the human mind whether individual or social, and whether temporary or permanent which do not make for well-being." Many psychologists will think that the definition would be improved by omitting the last phrase, on the ground that teleological categories have no place in an exact science and that philosophic speculation about the nature of well-being could thus be avoided. The author goes on to show that abnormal psychology includes, in addition to psychopathology, the study of the mob-mind, and the study of the subnormal. He hesitates, however, about including the study of the supernormal. This hesitation results from the failure to make a clear-cut distinction between teleological evaluation and scientific psychology. From the latter standpoint it is obvious that the term abnormal includes any marked deviation from the norm (*i.e.*, median), whether supernormal or subnormal, whether in behavior or in consciousness, whether in single mental traits, or in complex combinations of traits.

In the second division the author discusses the mob-mind and the group-mind, the gregarious instinct and its manifestation in increased suggestibility, sympathy and imitation, crowd-management, and the teacher as a crowd-leader. In the crowd the normal individual characteristics of suggestibility, sympathy and imitation are exaggerated, and this exaggeration is greater in some forms of crowds than in others. This trio of mental traits corresponds to the three aspects of mental life: cognition, affection, and conation. Exception may be taken to the author's definition of suggestibility as the "predisposition to the awareness of an adequate stimulus". A subject may respond to a suggestion without being aware of the stimulus at all. Suggestibility is perhaps a more general charac-

teristic of mind which manifests itself, among other ways, in sympathy and imitation.

The attributes and virtues of the teacher as a crowd-educator are described, and there is a plea for the use by teachers of the *irrational* aspects of the child's mind in early education. This chapter contains much that will be helpful to educators in the two-fold task of developing the intellect and molding the character; and it will be most helpful to those who believe that the function of the educational system is to maintain the *status quo;* for, although the author does say that the child should be led on to self-reliance and encouraged in the end to use his own reason, one feels that the early training may prevent him from attaining this goal. Would not the "questioning spirit" be more likely to develop, if alternatives were presented, and the habit of reasoning and questioning fostered from the beginning?

The third part of the book deals with the subconscious, mental dissociation and its causes, dreams, and psychoanalysis. This chapter is very well written and is a good résumé of the subject for the teacher. A brief historical account is given with special reference to the views of Janet, Freud, Prince, and Jung. In regard to mental dissociation both Prince and Janet go farther in their explanations than they are given credit for by the author. On the other hand much is ascribed to Freud that belongs to other writers. For example, the "complex", which is discussed as Freudian, is frequently used in Prince's sense and sometimes as equivalent to sentiment or to tendency. The implications of psychopathology for education and character-building, which the author does not differentiate, are clearly drawn and well expressed.

The last part deals with the subject of mental defect. The history and present status of intelligence tests, and the classification of defectives are briefly treated. Then follows an interesting historical survey of methods for educating defectives. This is one of the best parts of the book. The methods of Itard, Seguin and Montessori are described. Special tribute is paid to Seguin for his pioneer work. The section on the emotionally defective is inadequate. It covers merely eight pages dealing with a few aspects of emotional instability, and omits discussion of the hyper-emotional and the emotionally deficient. In view of contributions recently made, a whole chapter might have been devoted to this topic.

The author has achieved his aim of presenting some of the recent advances in abnormal psychology and of showing how far they have significance for the teacher. Members of the educational profession will derive much benefit from reading this book. J. W. Bridges.

Personality in Politics. By William Bennett Munro, Ph.D., Professor of Municipal Government, Harvard University. New York: Macmillan Company. Pp. 114. Price, $1.50.

This little book with its three essays on "Reformers, Bosses, and Leaders—what they do and how they do it", is an interesting contribution

to the new field of political psychology. It is a direct and suggestive approach to the problem of personality types, refreshingly free from digressions into psychoanalysis and test psychology. The author simply states in descriptive terms the personal qualities possessed by outstanding reformers, bosses and leaders in American political history, and draws pertinent conclusions regarding the reason for, and the function of, these three types in our society.

Reformers are characterized by their lack of appreciation of electoral psychology. Because of their absorbing faith in their cause they fail to study the mind of the people. No remedy, however simple or sovereign, can be marketed unless it is offered in such a way as to accord with the dominant mental content of the electorate. The appeal for "honesty" or "efficiency" in government does not touch off responses in the electorate as readily as does the equally ambiguous appeal for a "square deal". When reformers endeavor "to awaken the community conscience" or "to develop civic pride" they are likely to arouse resentment. No community lacks civic pride. "It matters not how stagnant its growth may be, or how wasteful its government, or how corrupt its administration, or how sordid the conditions of life among great masses of its people,—it will exude civic pride all the same." The reformer does not have insight into such points of popular psychology, and this lack is the chief reason why reformism so usually fails in politics. Furthermore, the reformer as a rule does not adequately visualize the workings of his proposal. "Many an ardent and burdensome reformer", says Woodrow Wilson, "would be put to better thinking if he were obliged to express his reform in the exact words of a workable statute."

Bosses flourish in certain localities where there is a tradition in their favor, where there is more than usual intricacy in the electoral machinery, or where there are special alliances to be effected between party leaders and vested interests. "Wealth has probably had much more to do with bossism than has poverty." The evolution of the boss is traced from his first activity as a "go-getter" in the service of the precinct captain on election day to his skillful manipulation of civic affairs, as a high-handed autocrat. The newspaper characterization of the boss—"plug-ugly, short and stocky, with a law brow and a square jaw, out of which a black cigar protrudes at an uncertain angle"—is scarcely accurate if one may accept the author's picture of the personalities of several of America's notorious bosses. They differ exceedingly in their traits; but an analysis shows that none of them has been indolent, untruthful, dissipated, or disloyal. The boss, however, can readily dispense with what to the reformer is of chief importance,—political "principles". The boss, furthermore, as opposed to the reformer, makes it a definite point "to study human nature and act accordin' ".

Our problem is not to abolish bosses and bossism, but to replace them with leaders and leadership. Government is never by the multitude; that would be a contradiction of terms. Even public opinion is in very large

measure the handiwork of the Few. Leaders are not guided by public opinion excepting in so far as they have created it. The leader originates the particular idea which becomes a dynamic force in the state. And yet this idea can never be too much at variance with the contemporary attitude of the citizens. In his speeches and writings the leader simply makes concrete and articulate the aspirations of those who are ready to be led. Thus, the leadership of Roosevelt "was the product of high ideals, sterling honesty, a rugged personality, and an ability to make himself a great sounding board for popular ideals". No schedule of traits may be accepted as final for a test of leadership; the leader must have qualities that fit his times.

G. W. ALLPORT.

SEELE UND LEBEN. Grundsätzliches zur Psychologie der Schizophrenie und Paraphrenie, zur Psychoanalyse und zur Psychologie Überhaupt. By Paul Schilder, Ph.D., M.D. Berlin. Julius Springer, 1923. 200 pp.

Psychiatrists, in their attitude toward the schizophrenic group of mental disorders, fall roughly into two categories; those, on the one hand, who seek the causative factors in these pathologies in definite physiological or organic lesions, and, on the other, those who attack the problem from the psychogenic point of view. The first crave solid ground; they follow the groove of traditional medicine. They cast out devils along with infected teeth and bits of alimentary tract, and search unceasingly in the microscope for the lesions of dementia precox. The second have coined an extensive jargon in their exposition of the recondite ramifications of mental dynamics. As might be guessed from the title of the book, Dr. Schilder belongs unmistakably in the second category.

Seele und Leben is a presentation, by means of voluminous records of the utterances of typical patients, of the trends, drives, interests and underlying mental mechanisms which characterize and determine the distorted schizophrenic personalities. It contains little that is new; even the methodology is not without precedent. The chief thesis of the author, which the book is apparently meant to illustrate, is a protest against the type of analysis characterized by a full and complete talking over, by the physician and patient, of the patient's thoughts, ideas and feelings It is held that, in this play of questions and answers, the resulting picture is a misleading distortion, and this for several reasons. Accurate introspection is at best difficult for the trained subject, and with the psychotic, these reports are but indices of the patient's own attitudes and biases. The effect of methodical questioning is to force upon the patient the ideas of the questioner. Again, this method, which is usually carried on intensively and but for a relatively short time, gives a very inadequate cross-section of the personality of the patient. As opposed to this, the author offers the long-section method. Only when the patient is allowed to ramble on *ad lib* (in one case, for twenty-six and a half

pages) can one get a true insight into the determining mechanisms of the case. Here only can one observe the significant sequences in which memories and utterances come, the emotional reactions conditioned upon them, the perseverations, blockings and repetitions. And the fidelity of the resulting picture, we are told, repays for the length of time taken to produce it.

It is questionable if this method holds exclusively the advantages that are claimed for it. Whether the facts are gathered by the "dictaphone" method or otherwise, they possess value for the purpose of understanding the case only in proportion to the intelligence, experience and acumen of the physician. It is quite possible, indeed quite likely, that the patient's reactions to questioning, particularly upon tender topics, would shed as significant light as his random circumlocutions.

Some day an inspired teacher is going to come along and tell us why it is that a certain breed of psychiatrist feels irresistibly impelled to risk his intellectual neck upon the precarious support of outworn metaphysics. I refer now to Dr. Schilder's explanations of his patients' trends. Although expressions such as "phylogenetic memory" and "collective unconscious" are not used, they exemplify the type of discussion that the doctor goes in for. One of his chapters, for instance, is entitled "Körper und Welt", another, "Ethos und Neurose." To these Hegelian dialectics it is beyond the reviewer's powers to do justice.

There is, however, a wealth of beautiful material in the histories, where one can see the development of psychoses to full flower; and, after all, one doesn't have to accept the interpretations. For the student whose knowledge of German exceeds his familiarity with the vague, disjointed verbosities of the psychopathic ward, the book is a gold-mine.

D. A. Macfarlane.

14 Mosswood Road, Berkeley, Calif.

Psychoanalysis and Aesthetics. By Charles Baudouin. Translated by Eden and Cedar Paul. New York. Dodd, Mead & Co., 1924. Pp. 328. Price $4.00.

This work is a study of the Belgian poet Emile Verhaeren. It is the application of psychoanalytic method to reveal the story of the poet's emotional development. The numerous citations from Verhaeren's works give ample and convincing illustrations of the theses which the author brings forward. Baudouin writes (p. 304): "Verhaeren's evolution may be described as follows: up to the end of the crisis, towards the poet's thirty-fifth year, he is a thorough introvert, strongly attached to his 'early affections', and suffering from a longing for the mother; later he becomes an extrovert, he acquires an interest in the outside world, he has conquered and is master of all the second terms of the coupled contrasts. Then he encounters love, which he understands as the intimate gift of self, as action; he finds he is a socialist, he realizes the beauty of modern life, he 'accepts' the 'factory' (a double symbol,

representing for him paternal authority and the reality of life). This is what we have named Verhaeren's 'conversion.' "

The "second terms of the coupled contrasts" are the various images or symbols which in the poet's experience have stood for external reality and active life. Thus the color gold is used to convey at first sensual life, and is frequently contrasted with black which stands for death and dissolution. Again the factory typifies practical struggle and is contrasted with the garden which stands for peace and dreams. Once more, the "monk" is one of the symbols of the early period of introversion, whereas the "crowd" and the "town" indicate the forces of the world outside. The poet's attitude towards these forces suffers a change which results in his final acceptance of the external. A powerful contributing circumstance was his love and marriage.

Some of the details of the conflict are traced in Verhaeren's lyrical dramas, where the expression of the *Oedipus* complex is elucidated by the author.

One of the most interesting ideas in the book is expressed in the phrase "a constant will towards enthusiasm" by which Baudouin wishes to convey that Verhaeren's "acceptance" of the external is not merely passive, but is a willed and active participation in social struggle.

The chapters entitled Introduction and Conclusion contain discussions of some phases of the psychology of imagination and of the affective life. The comments on the place of the symbol in poetry (pp. 296-7) seem to the reviewer exceptionally good. The whole exposition of the book is clear, reasonable, and in good taste, though its interest will doubtless be greatest for those readers who have an acquaintance with the poet's works.

KATE GORDON.

727 West 53rd St., Los Angeles, Calif.

THE MIND IN ACTION. A study of Human Interests. By George H. Green. New York and London. G. P. Putnam's Sons, 1924. Pp. xii+223.

In this book, forty thousand words are swollen by the book maker's art to look like a hundred thousand. Designed for the "ordinary man's" reading, the volume presents a journalistic salad of Freud, Coué and McDougall. It is hard to take it seriously, even for one who is fully convinced of the desirability of turning all the angles of scientific thought before all sections of the public. The purpose of popular education does not seem to be served by such statements as that, "Interest flows into the nervous system just as electricity flows into a series of insulated wires" (p. 34), and "It (the brain) has had transmitted to it the memory of how remembering is done" (p. 128). This seems to be the kind of thing that brings psychology into disrepute among such people as the " 'intellectuals' and publicity men" who heard the lecture from which the book was expanded. The man in the street very properly takes a pragmatic attitude towards a new and unfamiliar piece of scientific thinking. If he finds that

it works, fitting in with his own personal observation and experience, he adopts it as part of his mental stock in trade, and it is the function of a popular treatise to show him that it does work. The Mind in Action has not achieved this object for the subjects with which it deals.

The Freudian part of the exposition seems to be the best done, although Freud and McDougall lie together uneasily as psychological bedfellows. One closes the volume with the feeling that the author might have written a better book, as indeed he has.

GEORGE HUMPHREY.

Queen's University, Kingston, Ontario.

LA PSYCHANALYSE. Par Le Dr. Ch. Blondel, Professeur à la Faculté des Lettres de l'Université de Strasbourg. Paris. Alcan, 1924. Pp. xiii + 251. Price 9 fr.

This is a brief exposition of the Freudian doctrine on psychanalysis gleaned from "the master's" "La Psychanalyse" (American conference, 1909); "Introduction a la Psychanalyse", 1915–17; "Jenseits des Lustprinzips"; "Massenpsychologie und Ich-analyse"; "Zur Psychopathologie des Alltagslebens"; "Die Traumdeutung"; and "Der Witz und eine Beziehung zum Unbewussten". The book is divided into two parts, "the doctrine of Freud" and "psychanalysis in action". The former has seven chapters: "Erroneous acts; dreams; neuroses; the libido and infantile sexuality; the genesis of the neuroses; psychoanalytic therapeutics; the psychoanalytic conception of the mental life; and critical reflections", respectively.

Professor Blondel, like more and more others, is not too highly enthusiastic as to the substantiality of these doctrines so much talked of of late. He states his disrelish for "the master" and his notions in a trifle ironical form as well as in straightforward arguments set forth at length. His "Conclusion" is characteristic, and from it we may excerpt here and there:

"As an aid to the comprehension of the present nothing is more important than the teachings of the past: I have already compared Freud to Gall, and not without reason. Both came to us first from Vienna in Austria—an indication of the imperious tendency to repetition whose meaning the psychanalysts should explain. But both, always with an enthusiasm knowing no relaxation, a conviction without question, an ardor unrelenting, an imagination uncontrolled, have elaborated a vast and ambitious system which contemporaries have exalted or attacked with much rivalry. . . . One could, just as properly, compare Freud to Broussais. In one case as in the other there is the same spirit of distracted generalization, the same scientific apparatus devoted to disguising their wretched origins: the libido in the one case, sole cause of all the neuroses, and gastroenteritis in the other case, the essential lesion of all disease. Gall and Broussais belong to the history of ideas, not to the history of science, and it is necessary sometimes to distinguish between these two.

. . . Of Broussais nothing remains; of Gall, a metaphor. [Cf. B. Hollander.] . . . To those who keep the pace without other preparation and apply to-day or to-morrow their method to ethnography or to the critique of art, the psychanalysts find nothing to reply. But to their adversaries they object that in order to judge soundly of the psychanalytic doctrine, long and patient researches are necessary for proving the reality of Freud's discoveries, and to consecrate years of verification of his method before having the right to criticise it." Vive la joie de la vie!

GEORGE VAN NESS DEARBORN.

U. S. Veterans' Hospital, New York.

TEXTBOOK OF PSYCHIATRY. By Prof. Dr. Eugen Bleuler, Director of the Psychiatric Clinic, Zürich. Authorized English Edition by A. A. Brill, Ph.B., M.D. New York. The Macmillan Company, 1924. Pp. xviii + 635. Illustrations, 51. Price $6.00.

"This book", well says Doctor George H. Kirby of the New York State Psychiatric Institute (who writes for it an excellent introduction) "marks a notable advance in psychiatry in that it emphasizes sharply the contrast between the older descriptive psychiatry of Kraepelin and the newer interpretative pyschiatry of the present time which utilizes the psychoanalytical principles and general biological viewpoints developed by Freud and his pupils in Europe and by Meyer, Hoch, White and others in this country." It is the first translation of the textbook into English, and was made from the fourth German edition, the first having appeared in 1916. In 1906 Bleuler published a paper on Freudian mechanisms in the symptomatology of the psychoses—he being one of the first, therefore, to try to fit Freudism to psychiatry—an endeavor still in progress.

Of the fourteen chapters, the first (50 pages) is devoted to a normal psychological treatise, and the second (92 pages) to general psychopathology, not excessively Freudistic, and a fine summary of the disturbed mental function of insanity and of the psychoneurotic states. As one might expect, the systematic description of the physical concomitants of psychosis is pretty short, and as a matter of fact constitutes chapter three, only a few lines over three pages long. There is of course much neuropathology in other parts of the book, besides a bit here and there of the somatic pathology related in sundry ways to mental and nervous disordrs.

The other eleven chapters of the work are entitled as follows: IV, The Manifestations of Mental Diseases; V, The Course of Mental Diseases; VI, The Borderlines of Insanity; VII, Classification of Mental Diseases; VIII, The Recognition of Insanity; IX, Differential Diagnosis; X, Causes of Mental Diseases; XI, The Treatment of Mental Diseases in General; XII, The Significance of Psychiatry; XIII, The Individual Mental Diseases; XIV, Oligophrenias (Psychic Inhibitions of Development). Nearly 60 per cent of the book is taken up with the thirteenth chapter which is an excellent account, partly from the psychogenic viewpoint, of the types of psychosis and allied states just now in the best fashion. As nosology

is of great importance, both in theory and in practice, in psychiatry, it is worth while to quote Bleuler's plan-idea of it, namely: Acquired psychoses with coarse brain-disturbances; the toxic psychoses; infectious psychoses; thyreogenic psychoses; schizophenias; epilepsy; manic-depressive insanity; psychopathic forms of reaction (situation-psychoses); and the psychopathies. The states of incomplete mental evolution that we call in America feeblemindedness, etc., the author, following Kraepelin, terms the oligophrenias, "psychic inhibitions of development", an expression, this last, that well might seriously misinform the student of the relations of body and mind—something that every medical student should be, and will be a little later on. Without the monistic foundation one can expect little real understanding or progress.

Give this quotation to the prohibitionists for adequate promulgation: "Strange to say in the case of alcoholism the modern physician [52 per cent of them in America] has to be told that the most important part of the therapy is the *prophylaxis*. But one must realize that here too only the right remedy helps: abstaining from alcohol. *It is nonsense to recommend moderation; it is the very soil on which alcoholism flourishes.* The limitation, even the complete eradication, of alcoholism is possible if the determination is there. *There is no other avoidable disease that brings so much misery to civilized people.*" (The italics are the reviewer's.)

Nosologies go and come, name, designations, connotation change, from month to month sometimes, and there is nothing especially noteworthy, as compared with other treatises and textbooks about this one of Bleuler's on psychiatry proper. It has, however, one outstanding feature which in the more or less humble opinion of the present reviewer, makes it preeminently of value as a present textbook, namely 156 good pages on the psychology of insanity. Fifty-three of these (chapter one) are devoted to normal medical psychology, and the rest to the psychology of psychosis (chapter two). Doctor Brill, the translator, has done a fine and a most useful piece of educational work, but he has misled slightly a large number of persons in America and England by naming this, too literally far, "psychopathology". The material in these hundred and three valuable pages is not "psychopathology" as the term is employed to-day hereabouts, but good, straight psychology such as any American or English professor of psychology could write who knew adequately his psychiatry. As such it is of great value and just what the average student and the average practitioner of medicine, just what most neuropsychiatrists in truth, most need to orient them in their work.

Like every other European treatise known to the reviewer, the discussion of "oligophrenia", feeblemindedness, is wofully inadequate for a textbook of psychiatry; while the lack of matter on the diagnosis and the estimation of the degree of mental deficiency, puts the chapter on the subject approximately twenty years behind the calendar as set by American study and ingenuity. As in regard to so many other things, European medical men in numbers should follow the pleasing wisdom

and intention of the Prince of Wales to learn more of our great American civilization, and amid the screaming of the eagle (so often referred to in irony, years ago) learn sundry things that Europe as yet does not know. Conspicuous among these, plainly enough, is American psychology, and psychometry with all its ramifications. With 60,000 mental defectives in the Commonwealth of Massachusetts alone (according to recent press-reports of remarks by W. E. Fernald) the problem they present clearly is of unexcelled importance.

Taken as a whole Bleuler's textbook certainly is one of the very best the present market offers. May it prosper and live long therein!

GEORGE VAN NESS DEARBORN.

U. S. Veterans' Hospital, New York.

SALVAGING OF AMERICAN GIRLHOOD: A Substitution of Normal Psychology for Superstition and Mysticism in the Education of Girls. By Isabel Davenport, Ph.D., Consulting Psychologist; Author of "Adolescent Interests", etc. New York. E. P. Dutton and Company, 1924. Pp. xi + 302. Price, $3.00.

This is another of the numerous recent books looking toward the efficient enlightment of mankind in regard to the relations of the sexes. It is based on an investigation made by the author under the auspices of the Department of Psychology of Columbia University. "The aim of the research was to discover the actual state of sexual knowledge of young women of more than average education, in their late adolescence; and to investigate the character of their trends of interests when measured by the present-day conceptions and standards." One hundred and sixty girls, students of city normal schools, asked anonymously in writing more than nine hundred sexual questions. On this basis of need and of inevitable curiosity Doctor Davenport has formulated a "program" of instruction for use whenever and however and wherever it may be carried out aimed to supply this need of information to the common social betterment. This list of topics covers the matter properly, and the book is a useful one, therefore, to all and sundry planning such work with girls. What we all are seeking of course is the education of popular opinion so that the work may be done on the scale necessary. The old, old story of universally recognized need balked by the old, old dogmatic prejudices born of medieval ignorance! But only for one per centum of humanity's lifetime has man been even civilized up to now,—why need we be surprised that he cannot become cultured over night? And now he learns apace at least how ignorant of himself he really is.

GEORGE VAN NESS DEARBORN.

U. S. Veterans' Hospital, New York.

LIFE AND CONFESSIONS OF A PSYCHOLOGIST. By G. Stanley Hall, Author of "Adolescence", "Senescence", etc. New York and London. D. Appleton and Company, 1923. Pp. ix + 623. Illustrated.

Cattell on a memorable occasion defined psychology as anything that a "psychologist" cares to "do", and this book, the crowning work of another pioneer American psychologist when he was seventy-seven, certainly is psychology of the individual sort and to a less degree of the historical variety. About two-thirds of it is purely autobiographic and the other third (chapters eight and nine) an unexcelled summary of a certain aspect of American psychology and education.

The biographic part is satisfyingly informing about the author's forebears and about himself, going into much detail. Read with "Senescence", "Recreations of a Psychologist", and "Jesus, the Christ, in the Light of Psychology", one gets from it as complete an insight into a wise and great man's mind and personality as one can find since Pepys,—and of course with a perfection of analysis and a verbal precision mostly lacking in the famous diarist of London Towne, applier of a most "human" psychology though he was.

With so much wherewith to interest a reader of the *Journal*, it is not easy to pick and choose. It is gratifying to know that Stanley Hall counted his long life one blessed by queen-goddess Fortuna, for if it satisfied him as fully as it did most of his friends, surely all is well! "On the other hand, despite all the above, I must count my life as, on the whole, a happy and fortunate one, and that chiefly because I have been very exceptionally able to follow my own inner interests and inclinations." (Incidentally, of course, right here is the sanction to most all college professors, scrimping along year after busy year on a pittance that keeps the shoes of the children shabby and the Ford dingier and dingier—they are doing their bit in life just as they choose to do it, more stoical than they know and their wives mostly more stoical yet.) President Hall terms this his life-preserver, "almost literally a life preserver".

One is shocked almost to hear him say, as so great a horde of great men have thought and said before him (and forevermore!): "The dominantly sad note of my life may be designated by one word, isolation." One is sorry, but yet one wonders! for, after childhood, isolation commonly is one's own fault or one's own choice.

Although the author introduced Sigmund Freud to America, he shows little enthusiasm over the latter's claim recently made that "there are three great culture-epochs in the world: (1) the Copernican revolution; (2) Darwinism; (3) his own achievements in properly introducing the unconscious to the world" (note the self-hatred implied here), for Hall says, "I certainly have yet to learn of any immortality that can be ascribed to our cult of psychoanalysis here." And yet he appreciates the contribution of Freud more adequately than do most men of similar insight, and realizes and sets forth its larger relations.

There's a bibliography, presumably mostly complete, a fairly good index and numerous portraits.

All told, the book is one of absorbing interest to every psychologist of whatever class, social or individual, normal or abnormal, bond or free.

GEORGE VAN NESS DEARBORN.

U. S. Veterans' Hospital, New York.

MIND AND MEDICINE. By Thomas W. Salmon, M.D., Professor of Psychiatry in Columbia University. New York. Columbia University Press, 1924. Pp. v + 33.

This timely and convincing argument by one of the philosophers of medicine was the annual address at the opening of the College of Physicians and Surgeons, Columbia University, in September, 1923.

Its general subject-matter may be indicated from Professor Salmon's own topical table of contents: "Introduction; attitude of medicine toward insanity; attitude of medicine toward psychoneuroses; attitude of medicine toward other mental problems; origin of present attitude toward mind; waning interest in function; some new tendencies; conclusion." The address presents "a few of the numerous evidences that scientific medicine has too much neglected the psychic factors in disease". Of course these often have been presented before (*e.g.*, in *Science*, N. S., XIV, 343, 26 July, 1901, pp. 129–136) but still the important propaganda for reform lags and the reform in medical education is wofully but characteristically slow,—medical students still are mostly materialists, that is the crux of the matter.

The author's plea is for monism, applied monism, the philosophic trend of science everywhere—the wholly indispensable viewpoint of every bit of real understanding of the relations of body and mind. In research, he says, "One will deal chiefly with states of brain, and the other chiefly with states of mind, but each will be familiar with the other's point of view and know the value of his approach. Then, and then only, will the mysteries of brain and mind and their relations to each other be revealed." But how convince the William Jennings Bryans, uninformed and seeing narrowly and always well within the nearpoint of normal vision, that this is the truth and that only this truth shall make us whole?

Professor Salmon's address skillfully presents the important matter anew, but makes us all the more eager to see psychology, and a bit of philosophy besides, as strictly required in the College of Physicians and Surgeons as service in the Sloane Maternity or the passing of "Anatomy 101 to 109".

GEORGE VAN NESS DEARBORN.

U. S. Veterans' Hospital, New York.

THE AMERICAN MIND IN ACTION. By Harvey O'Higgins and Edward H. Reede, M.D. New York and London. Harper and Brothers, 1924. Pp. v + 336. Price $4.00.

This is an essay in Freudian popular literary subconscious psychology, whatever that is. How much of it should be laid at the door of Doctor Reede seems not to be indicated in the text; perhaps his part was to keep O'Higgins healthy while it was being produced and perhaps reviewed. The book has much charm and is often entertaining notwithstanding that one hears now and again the creak of the gossip-mill that is a considerable part of its process, working on a background of sex, of a caricature of "Puritanism", and of biography, cynical and (like all cynicism) superficial, and soaked throughout in Freudism.

There are fourteen chapters and there is not an index (and probably an index, for once, would be inadvisable): Mind "in general; in Mark Twain; in Abraham Lincoln; in Ralph Waldo Emerson; in Andrew Carnegie; in Anthony Comstock and P. T. Barnum; in Benjamin Franklin; in Henry W. Longfellow; in Walt Whitman and Mark Hanna; in American women; in Julia Ward Howe; in Anna Howard Shaw; in Margaret Fuller; in conclusion". The minds "in action" (too bad he doesn't describe an inactive mind!) obviously are chosen for their dramatic, Freudic values and their accessibility rather than for their typicality. In varying degrees the minds chosen for travesty are those of geniuses, living mostly in an American environment, and the American mind proper, namely that of the quasi-*average* resident of the United States, has no consideration whatever. This O'Higgins doesn't know.

Compare Mark Twain's "autobiography", just published, with Mr. O'Higgins's blarney about him, "the typical American": "He was Robert G. Ingersoll disguised as a humorist, and his unconscious timidity put that disguise on him and prevented him from being such a satirist as Dean Swift. His sense of inferiority made him conceal his satire in buffoonery—that is to say, when he wished to satirize his reader he satirized himself, and the reader laughed at his own absurdities put forward as Mark Twain's." "He was full of the American's Puritan anxiety, and he drained off his repressed hatreds and revolts in humor." "Outside of his art, he was as profound a biological failure as America has produced." Here one certainly needs his literary overshoes, and O'Higgins a Canadian, too!

In like manner, to the deep wisdom of an O'Higgins, the "dogmas" of Longfellow obviously were "inspired by the need of escaping psychic anxiety", which were "eagerly accepted by the intellectual classes of New England who were most suffering from soul-fear". In the case of Abraham Lincoln, "a typical 'soul-fear' was added to his early recognition of inadequacy by his mother's religious teaching, as in Mark Twain's case. And his soul-fear became the strongest subconscious determinant of his temperament." In the case of Benjamin Franklin, also, "there was still a Puritan drive of soul-fear".

If one has the stomach not to be annoyed by this Freudic-O'Higgins obsession, these biographic sketches of Americans, written by a native of Ontario, will have interest for many as all such stories must have when loaded with every scurrilous bit of gossip obtainable. But one wonders why one calls such stuff "psychology",—is it because the word helps to sell the books just at present?

GEORGE VAN NESS DEARBORN.

U. S. Veterans' Hospital, New York.

WOMEN CHARACTERS IN RICHARD WAGNER: A Study in "The Ring of the Nibelung". By Louise Brink, Ph.D. New York and Washington. Nervous and Mental Disease Publishing Company, 1924. Pp. xv + 125.

This work along Freudian directions is monograph number thirty-seven in the well known and valuable series edited by Doctors Jelliffe and White. Its author has previously published (number thirty-four) "Psychoanalysis and the Drama". The book is divided into two unequal parts named respectively "the psychic problem" and "the problem in the drama". The three chapters of the former are "the problem stated by the poet and by psychoanalysis"; "the infantile basis of character"; and "the relation of the child to the parent". The "problem" in the drama is discussed in five chapters: "the bondage to infantile goals"; "the beginning of the child's freedom"; "the daughter's struggle for freedom"; "the awakening to adult love"; and "the victory of love in the face of defeat". Besides these eight chapters there's an ample bibliography, a good index, and an enlightening foreword.

This is "the same old stuff", and reviewing it in detail would be to say over again the old routine of Oedipus complex, repression, the daughter's struggle for freedom, eroticism, the agreement of art and Freud,—world unimagined quite until Freud found it expedient in his business to imagine it. The blessed damozel Christina Rossetti expresses much in a few lines, not German but germane.

> "And ancient men shall lie down wearily,
> And strong men shall rise up in weariness;
> Yea, even the young shall answer sighingly,
> Saying one to another: 'How vain it is!' "

In fact, I suggest this as the motto of those who cannot see the "light" although dazzled, dazed, and wearied by its flood.

Professor Blondel (Strasbourg) also speaks for me: "A ceux qui leur emboîtent le pas sous autre préparation et appliquent du jour au lendemain leur méthode a l'ethnographie ou à critique d'art, les psychoanalystes ne trouvent rien à redire. Mais a leurs adversaires ils objectent que, pour juger sainement de la doctrine psychanalytique, il faut par de longues et patientes recherches éprouver la réalité des découvertes de Freud et con-

sacrer des années a la vérification de sa méthode avant d'être endroit de la critique."

Doctor Brink says that she received her first impulse to investigate "the more profound meaning of Wagner's life and art" from E. Lucka's "Die Drei Stufen der Erotik", 1913, which deals with the musician's "deeper conflicts"—which or some of which years ago certainly are already pretty well known to the world! But, says the devotee, boor and ignoramus! Boo! says psychology. Only for the paranoiac does no hope remain.

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U. S. Veterans' Hospital, New York.

WOMEN AND LEISURE: A STUDY OF SOCIAL WASTE. By Lorine Pruette, Ph.D. With an Introduction by Harry Elmer Barnes. New York. E. P. Dutton and Company, 1924. Pp. xxv + 225. Price $3.00.

"It is not the purpose of this study to outline this new form of human or social engineering; it can go no further than to sketch in brief and hasty fashion some of the phases of the activities and desires of woman to-day. It is safe to say that new and necessary adjustments to the requirements of living in this twentieth century will not come through theorizing, but will develop slowly and painfully through the pressure of immediate needs. In the increasing economic pressure may be seen the chief incentive toward eliminating or at least reducing our present social wastage." This, the final paragraph of the author's Introduction, seems adequate sanction for this book's fabrication mostly out of the data derived through questionnaires. Works of this origin have been numerous of late, and most of them are interesting and valid as far as they go. They are a kind of academic hootch or laboratory-brew and represent a sedimentation as well as a concoction of human lay-opinions not yet declared contrary to any constitution—unless it be the constitutions of their readers. Professor Barnes has sampled the present economic refreshment and has smacked his lips, so to say; while to Professor Franklin Giddings the volume undoubtedly owes a quite proper proportion of its unquestioned sociologic and economic wisdom.

Besides a preface, two introductions, a brief appendix, and a short index, there are ten chapters of text averaging twenty pages each, and titled thus: "The tendency to activity; the division of social labor; women in the division of social labor; occupational trends in the employment of women; women who work for nothing; shall the married woman work?—what three hundred men think about it; the choice: career versus home; day-dreams of the adolescent girl; conclusions; and freedom to adventure." A useful bibliographic list has a place at the ends of each of six of these chapters.

With the various questionnaires (including one answered by about three and one-half hundred men as to the work of woman outside her home) there is here no particular, that is, special and individual, concern,

for the reason that none shows any result in any way surprising or contrary to antecedent probability. They make good doctorate-material and have the human interest (greater than most interests) that is inseparable from any treatise, apparently, having to do with even sublimated sexuality.

The book has several references to the instincts and although written by a woman somehow lacks adequate basis and firmness of foundation in what the reviewer has no hesitation in believing one of the two or three of the most vital drives of womankind: "to love and be beloved. Men and gods have not outlearned it, and how oft so e'er they've turned it, not to be improved." Perpetual maidenhood remains one of the two or three most cruel tragedies of life, however successfully many women, ingenious in saving pride and making excuse, may camouflage this basal demand. May one call what Doctor Pruette terms "careers" for women subconscious defense reactions? Or are there really a considerable number of women who actually would enjoy a business life single more than a husband, children, and a home?

At any rate, this interesting book deserves wide reading and more discussion than it is likely to receive.

GEORGE VAN NESS DEARBORN.

New York.

NEW BOOKS RECEIVED

(This notice does not preclude the book from further review or comment.)

Collected Papers, Volume III. By Sigmund Freud. London. The Hogarth Press and the Institute of Psychoanalysis, 1925. Pp. 607. Price 30/.

La Defense Psychique. Par M.-I. Boas. Paris. Félix Alcan, 1925.

The Inheritance of Mental Diseases. By Abraham Myerson, M.D. Baltimore. Williams and Wilkins, 1925. Pp. 336. Price $5.

Clinical Psychology. By Louis E. Bisch, M.D., Ph.D. Baltimore. Williams and Wilkins, 1925. Pp. xiv+346. Price $3.

International Clinics, Volume 1, 35th Series. By various authors. Philadelphia. J. B. Lippincott Co., 1925. Pp. ix+301.

Le Freudisme, Exposé et Critiqué. Par Dr. J. Laumonier. Paris. Félix Alcan, 1925. Pp. 172.

Portrait of a Publisher and the First Hundred Years of the House of Appleton By Grant Overton. New York. D. Appleton & Co., 1925. Pp. 95.

La Relativité de la Conscience de Soi; Introduction à la Psychologie Clinique. By Dr. A. Hesnard; Préface du Prof. G. Dumas. Paris. Félix Alcan, 1924. Pp. 144.

Leopold and Loeb. A Psychiatric-Psychological Study. By Maurice Urstein. New York, 1924. (And Chicago Medical Book Co.) Pp. 132. Price $2.50.

Directory of American Psychological Periodica

American Journal of Psychology — Ithaca, N. Y.: Morrill Hall. Subscription $6.50. 600 pages annually. Edited by E. B. Titchener. Quarterly. General and experimental psychology. Founded 1887.

The Pedagogical Seminary and Journal of Genetic Psychology — Worcester, Mass.: Clark University. Subscription $5. 520 pages annually. Edited by Carl Murchison and coöperating board. Quarterly. Child behavior and genetic psychology.

Psychological Review — Princeton, N. J.: Psychological Review Company. Subscription $4.25. 480 pages annually. Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.

Psychological Bulletin — Princeton, N. J.: Psychological Review Company. Subscription $5. 720 pages annually. Psychological literature. Monthly. Founded 1904. Edited by Samuel W. Fernberger.

Psychological Monographs — Princeton, N. J.: Psychological Review Company. Subscription $5.50 per vol. 500 pp. Founded 1895. Ed. by Shepherd I. Franz. Published without fixed dates, each issue one or more researches.

Psychological Index — Princeton, N. J.: Psychological Review Company. Subscription $1.50. 200 pp. Founded 1895. Edited by Madison Bentley. An annual bibliography of psychological literature.

Journal of Philosophy — New York; Sub-Station 84. Subscription $4. 728 pages per volume. Founded 1904. Bi-weekly. Edited by F. J. E. Woodbridge and Wendell T. Bush.

Archives of Psychology — Sub-Station 84, N. Y.: Archives of Psychology. Subscription $5. 500 pp. ann. Founded 1906. Ed. by R. S. Woodworth. Published without fixed dates, each number a single experimental study.

Journal of Abnormal Psychology and Soci Psychology—Boyd Printing Co., Inc., Alban N. Y. Subscription $5. Edited by Morto Prince and Floyd H. Allport. Quarterl 432 pages annually. Founded 190 Abnormal and social.

Psychological Clinic — Philadelphia: Psy chological Clinic Press. Subscription $2.5 288 pages. Ed. by Lightner Witmer. Founde 1907. Without fixed dates (9 numbers Orthogenics, psychology, hygiene.

Training School Bulletin — Vineland, N. J. The Training School. Subscription $1. 16 pp. ann. Ed. by E. R. Johnstone. Founde 1904. Monthly (10 numbers). Psycholog and training of defectives.

Comparative Psychology Monographs — Baltimore: Williams & Wilkins Co. Sub scription $5. 500 pages per volume. Edite by W. S. Hunter. Published without fix dates, each number a single research.

Psychoanalytic Review — Washington, D. C 3617 10th St., N. W. Subscription $6. 50 pages annually. Psychoanalysis. Quarterly Founded 1913. Ed. by W. A. White an S. E. Jelliffe.

Journal of Experimental Psychology — Princeton, N. J.: Psychological Review Com pany. 480 pages annually. Experimenta Subscription $4.25. Founded 1916. Bi monthly. Ed. by John B. Watson.

Journal of Applied Psychology — Worceste Mass. Florence Chandler. Subscription $ 400 pages annually. Founded 1917. Quar terly. Edited by James P. Porter an William F. Book.

Journal of Comparative Psychology — Bal more: Williams & Wilkins Co. Subscripti $5. 500 pages annually. Founded 19 Bi-monthly. Edited by Knight Dunlap a Robert M. Yerkes. (P. S.